

# ENVIRONMENTAL ASSESSMENT

*Oklahoma State Veterans Cemetery  
Ardmore, Carter County, Oklahoma*

*Project Number: OK-16-04  
CAPS Project Number: 20179AE*

*Prepared for:*



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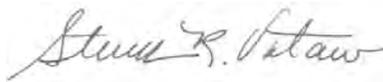
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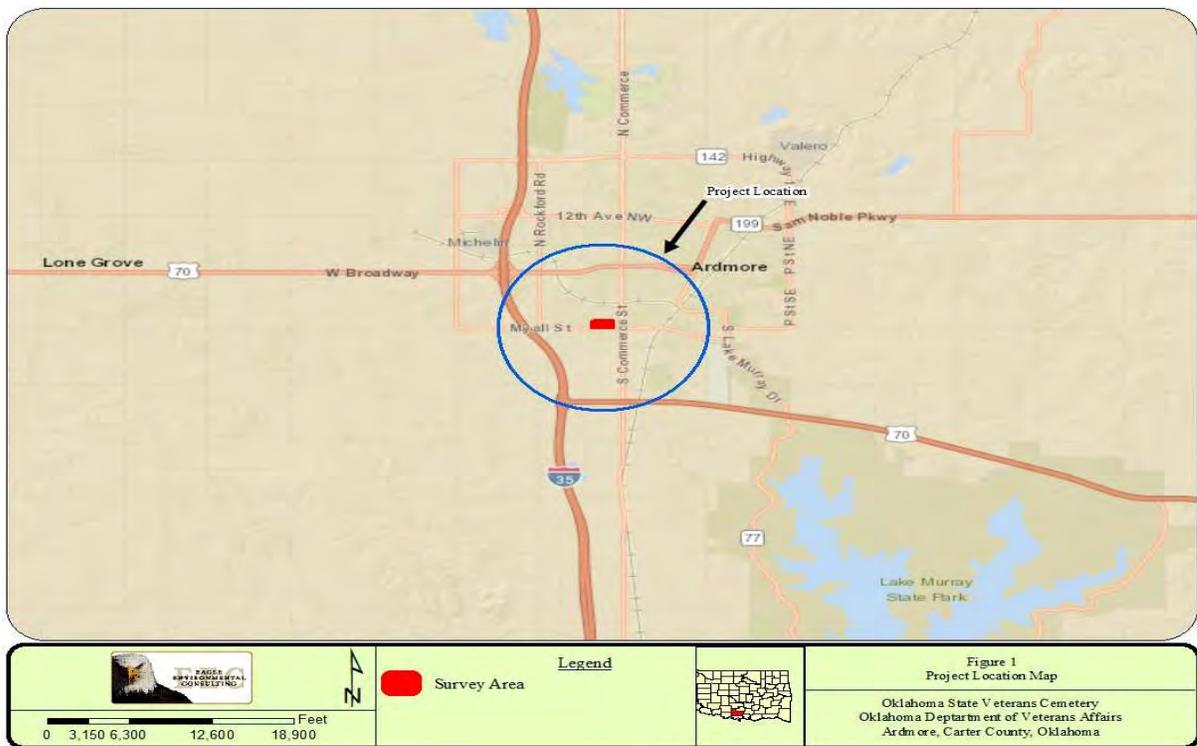
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## 1.0 INTRODUCTION

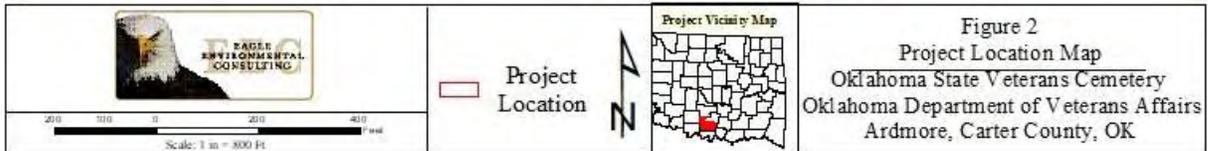
The Oklahoma Department of Veterans Affairs (ODVA) proposes to construct the State of Oklahoma Veterans Cemetery in cooperation with the United States Department of Veterans Affairs (USVA) in Ardmore, Carter County, OK. The project area is located northwest of the intersection of Myall and Commerce Streets in Section 36, Township 4 South, Range 1 East. Eagle Environmental Assessment (EEC) has prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [USC] §§ 4321-4347), the President’s Council on Environmental Quality (CEQ) NEPA Implementing Regulations (Title 40 of the Code of Federal Regulations [CFR] §§ 1500-1508), Veterans Affairs’ NEPA regulations titled “Environmental Effects of the Department of Veterans Affairs Actions” (38 CFR Part 26), and Veterans Affairs’ NEPA Interim Guidance for Projects (VA 2010). This EA incorporates the assessment that has been prepared for the United States and Oklahoma Departments of Veterans Affairs. The proposed action is situated on approximately 20 acres of property and includes both terrestrial and aquatic areas.

The general project area is identified on *Figure 1*. The proposed action area is shown on *Figure 2*. Representative photos of the proposed action area are provided in *Appendix A*. The considered action alternative exhibits are provided on *Figures 3, 4, 5 and 6* for visual reference of the considered design alternatives.



Project scoping letters were mailed to appropriate state and federal regulatory/resource agencies and native American tribes on January 6, 2020, to identify and comment on environmental and socioeconomic issues that should be considered as part of this assessment. The letters are provided in *Appendix B*. Agency names and tribal nations contacted along with their respective project-related comments are summarized in *Table 8* of *Section 5.0* of this document.

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## 1.1 Project Background

The site was selected by the ODVA in the City of Ardmore, OK and was researched, analyzed, and surveyed by TerraSite Design team to ensure the proposed action area would accommodate the proposed cemetery development project with no outstanding factors that would limit or prevent said development. Topographical, vegetative, geotechnical, legal, and existing site conditions were examined and maps. The approximate 19-acre site is adjacent to the existing Veterans Administration Campus at Ardmore and the proposed cemetery would be developed on property currently owned by the ODVA. Topographically, the site is ideal for implementing a cemetery and is currently open space and a grassy field. A small waterway transitions within a mapped floodplain area near the northwest corner of the action area, however neither the waterway nor floodplain area will be affected. Three alternative site designs were considered in addition to the preferred alternative. Site analysis and design plans have been completed for the Preferred Action Alternative (PAA). Adjacent land use includes single family residential to the south and west, commercial to the east, and undeveloped ODVA-owned space to the north. Rezoning of the parcel was completed through the City of Ardmore to allow cemetery development. Stormwater requirements will align with City of Ardmore Engineering and may require detention/retention facilities. The action area and NEPA study limits are shown on *Figure 2*. The overall project scope required the following elements to be incorporated within the proposed action:

- Administration and Maintenance Buildings
- Committal Service Shelter
- 162 internments/year for a total of 1,620 over a 10-year period
- Columbaria – 410 niches
- In-ground cremains 220 – 250-500 in ground
- Pre-placed crypts – 1,000 PPC (1% oversized)
- Flag Assembly; Avenue of Flags
- Memorial Walk and Memorial Wall
- Landscaping, Irrigation, Signage, and Infrastructure

## 1.2 Purpose and Need

The purpose of the proposed action is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. Developing the proposed cemetery in Ardmore would:

- Allow the use of ODVA-owned property.
- Negate the need to acquire new property.
- Provide additional and appropriate veteran interment space.
- Provide a state-of-the-art Veterans Cemetery adjacent to the regional ODVA campus.
- Provide improved access for family/visitors, and serviceability to the proposed new facility.
- Allow utilization of and access to existing infrastructure and utility services.

## 2.0 Alternatives Considered

### 2.1 No-Action Alternative

The National Environmental Policy Act (NEPA) and the (CEQ) provided regulations on the implementation of NEPA and require consideration and analysis of the No Action Alternative (NAA). Under the “No Action” alternative, no new veteran’s cemetery facility would be developed. The no

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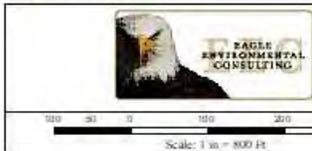
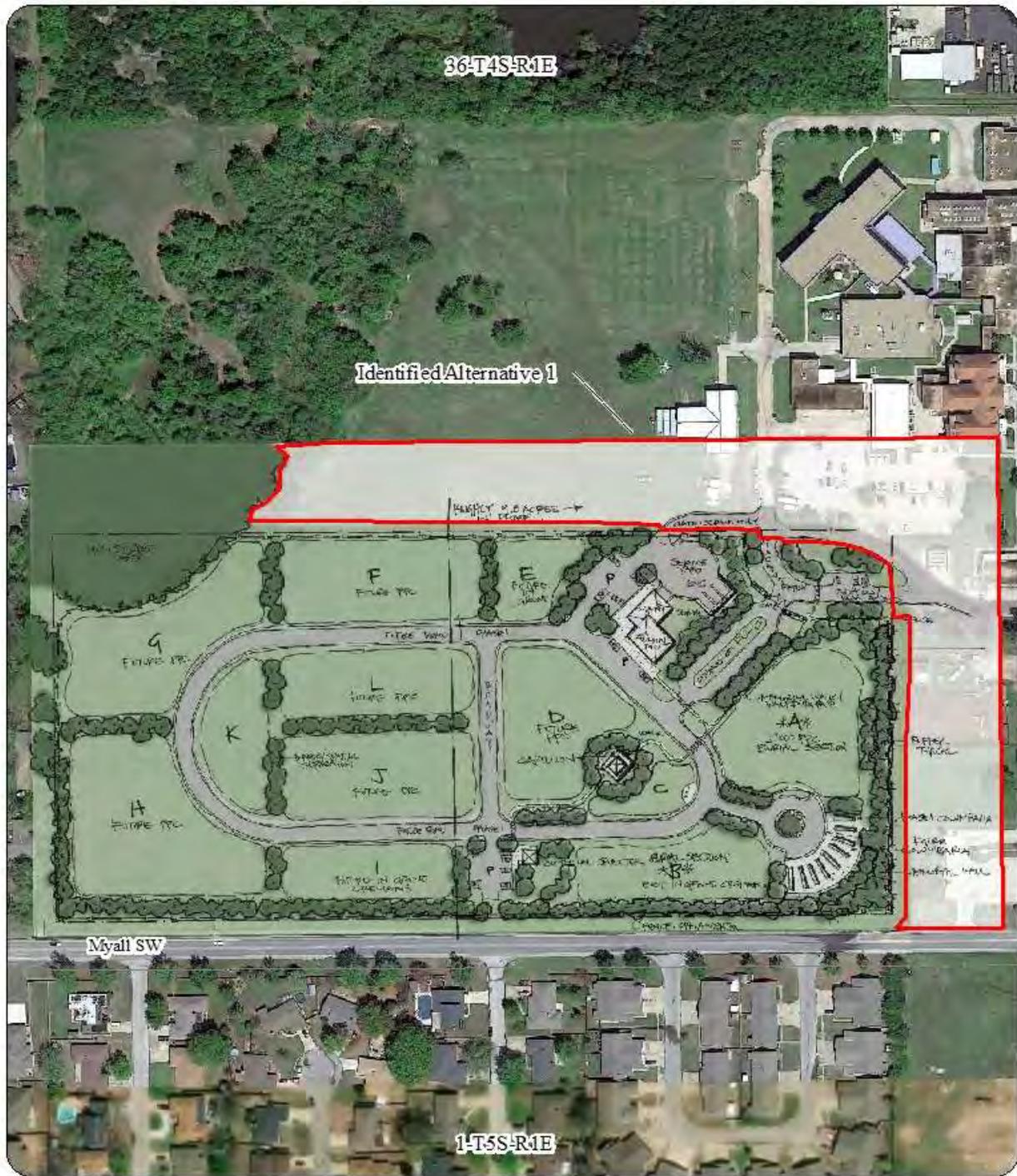
action alternative does not adequately meet the purpose or need for the new facility goals or veteran service requirements. Although the No-Action would not satisfy the purpose or need for the proposed action, this alternative is included in the assessment to provide a comparative and reference baseline relative to the potential effects of the proposed action. The No-Action Alternative is synonymous with no change to the existing environment.

### **2.2 Alternative Identified but not Further Considered**

As discussed in Section 1.1, three alternative cemetery site designs were considered as part of the master planning process. Each considered alternative was situated with the proposed action area. Through careful review of each considered alternative by the review team, it was determined these alternatives would not meet the required design criteria or overall site functionality requirements. Therefore, these alternatives will not be carried forward in the environmental assessment. The considered design and overall facility layout alternatives are discussed below and incorporate visual reference exhibits for each. It should be noted, each identified alternative met the interment requirements established by the ODVA, USVA, National Cemetery Administration (NCA), and Veterans Cemetery Grants Program (VCGP) scope requirements listed above. However, these alternatives were not selected for the following reasons:

- **Identified Alternative 1 (Figure 3)**
  - The review team officials concurred the site geometry and circular pattern of movement and columbaria located in the southeast corner of the property to align the proposed project with the USVA VCGP grants program requirements. However, this design involved access through the existing ODVA campus and did not provide the required access point to/from Myall Street.
- **Identified Alternative 2 (Figure 4)**
  - ODVA and VCGP officials determined this alternative would meet the access requirement to/from Myall Street and the separation of the administration and maintenance buildings. However, the review team did not believe the circulation design would be functional and result in restrictions to interior ingress/egress.
- **Identified Alternative 3 (Figure 5)**
  - The review team determined this alternative was too heavily-weighted to west side of site and determined the Myall Street access point needed to be in the middle portion of the property. The review team determined the maintenance and administration buildings should be separated. The review team concurred with the stormwater elements being established in SW corner of property to receive stormwater from the entire site and provide conveyance into the drainage easement established by the City of Ardmore.

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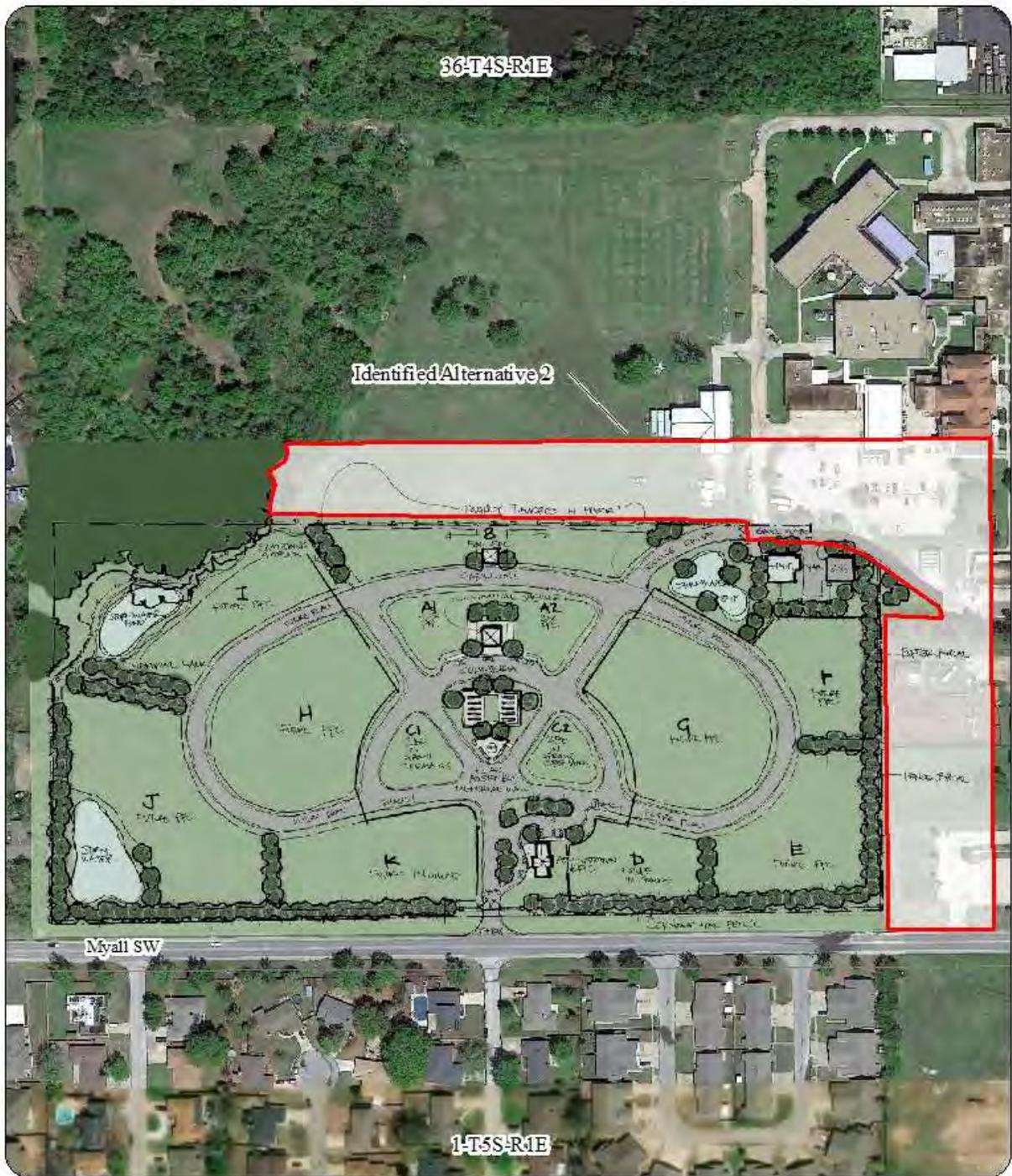
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Alternative Location



Figure 3  
 Identified Alternative 1  
 Oklahoma State Veterans Cemetery  
 Oklahoma Department of Veterans Affairs  
 Ardmore, Carter County, OK

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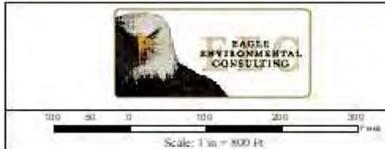
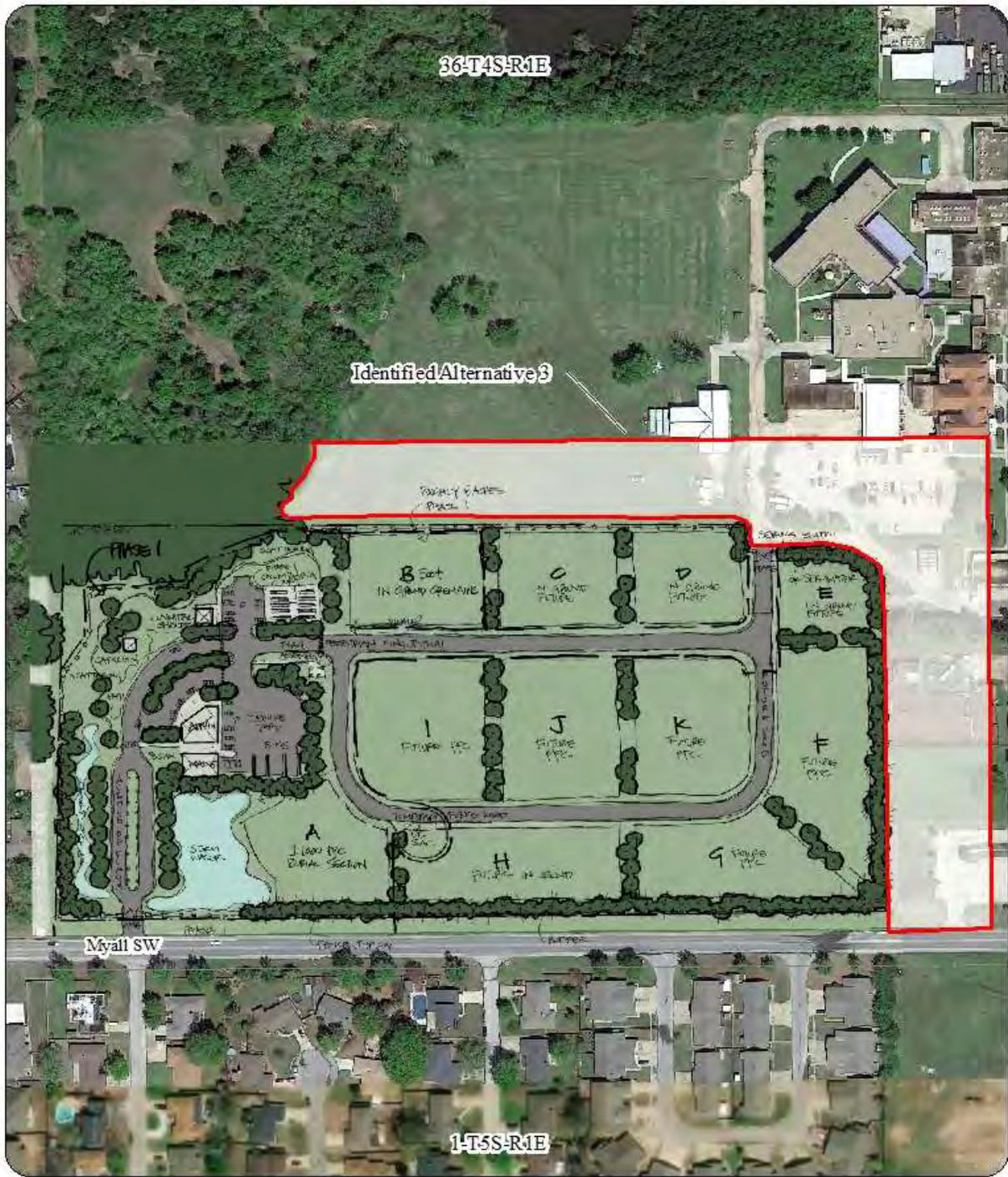
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Alternative Location



Figure 4  
 Identified Alternative 2  
 Oklahoma State Veterans Cemetery  
 Oklahoma Department of Veterans Affairs  
 Ardmore, Carter County, OK

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Alternative Location



Figure 5  
 Identified Alternative 3  
 Oklahoma State Veterans Cemetery  
 Oklahoma Department of Veterans Affairs  
 Ardmore, Carter County, OK

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### **2.3 Action Alternative - Proposed Action Alternative (PAA)**

The PAA best meets the proposed actions purpose and need. Construction of the proposed action best meets the criteria set forth by the ODVA, USVA, NCA, VGCP for a new veteran's cemetery in Ardmore (*Figure 6*). The proposed action would meet the following needs toward providing:

- The PAA represents a synthesis of the three considered design alternatives evaluated during the project design reviews. The PAA provides the best overall site design requirements which included 1) primary access from Myall Street, 2) separation of administration and maintenance buildings, 3) columbaria in the southeast corner of the parcel, 4) circulation patterns, and removed the need to access the cemetery through the existing Ardmore campus entrance. All other required scope elements would be incorporated into the PAA.

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Alternative Location



Figure 6  
Preferred Alternative  
Oklahoma State Veterans Cemetery  
Oklahoma Department of Veterans Affairs  
Ardmore, Carter County, OK

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### 3.0 AFFECTED ENVIRONMENT and ENVIRONMENTAL CONSEQUENCES

This section presents the general description of the conditions and resources relevant to the proposed action area. Existing conditions of the proposed action area within the approximate 19-acre study area are described below associated with the relevant public interest review factors. This section also presents an analysis of the potential environmental consequences under the NAA and PAA with respect to the identified public interest review factors. No detailed discussions relative to the Identified Alternative but not Further Considered are included.

#### 3.1 Land Use

Land use refers to the purpose and current usage activity a given parcel provides or supports whether undeveloped, residential, commercial, recreational, industrial, agricultural, or no obvious utilization. The following provides perspective on the natural features associated with the general project area and is used as a comparative basis to describe the current conditions/features of the action area.

##### Ecoregion

The action area is located in the Southern Cross Timbers ecoregion. The project area is located within the tall grass prairie and oak savanna native to the rolling hills and plains of the Arbuckle Uplift, and developed over a unique mosaic of limestone, granite, dolomite, sandstone, and shale. Upland soils that were derived from limestone are usually shallow, moisture deficient, and erodible if disturbed; they are extensive and are now used as grazing land. Upland soils that developed from granite are sufficiently deep to permit farming. Cropland is common on floodplains. Stream substrates are typically composed of gravel, cobble, bedrock, or, particularly in the east, coarse sand. Most streams have some spring influence and many are dominated by spring flow, especially in the summer. Perennial, clear, cool streams are common.

##### Physiography

Undulating plains interrupted by scattered hills, and ridges typical of the Arbuckle Uplift. Streams have long, wide, deep pools that are occasionally interrupted by short, high gradient riffles. Riffles generally have gravel substrates. During protracted droughts and during most summers, streams typically have little or no flow. In streams that cease flowing, pool areas may be 0.4 miles long and over 10 feet deep.

##### Geology

Mantled by Quaternary alluvium, terrace deposits, and sandy loam to silty clay loam decomposition residuum (containing sandstone fragments and shale chips). The area is mostly underlain by Pennsylvanian-age shale and sandstone with intermixed coal seams.

##### Vegetation

The natural vegetation types include cross timbers, oak–hickory–shortleaf pine forest, and mosaic of tall grass prairie dominated by big bluestem, little bluestem, switchgrass, and Indiangrass, and oak–hickory forest. Native on fire-prone plains with moisture deficient soils: scattered prairies with a few large oaks. Wetland areas are present in upland depressions and on flats with impermeable, clay-rich soils or pans. Lush deciduous forests are native along streams. The undulating upland areas also exhibit extensive savanna and woodland composed of post oak, blackjack oak, southern red oak, hickory, and understory grasses are native. The rugged areas more are dominated by post oak, black oak, white oak, hickories, maple, elm, and eastern redcedar occur. Floodplains forests generally contain eastern cottonwood, sycamore, elm, southern red oak, green ash, sugarberry, pecan, and black willow.

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### Land Cover and Land Use

Pastureland and hay land are extensive but cropland is somewhat limited. Livestock farming are important land uses. Grain sorghum, wheat, and alfalfa are typically the most frequently planted crops. Natural gas and oil production is present throughout the ecoregion.

### Action Area Land Use and Condition

The action area exhibits relative flat topography and is currently described as an open herbaceous field that is routinely mowed and maintained. The wooded areas are restricted to the riparian associated with the intermittent waterway near the northwest corner of the parcel. The vegetative community is described as improved pasture and not native range. The water features identified are not located within the action area and are not considered pristine. No prominent physiographic features are present. No other land use was observed or identified. The area may also be mowed and/or treated with herbicide to reduce woody vegetation colonization or regeneration. Land use of the properties situated north, west, and south of the project area is described as residential, commercial, and institutional. No cultivated crop areas are present.

### Environmental Consequences

The construction/grading plan will be performed in accordance with standard engineering guidelines and practices. Construction would require removal of existing herbaceous and woody vegetation and grading of the existing landscape to match the design features. The PAA would result in the direct and permanent impacts to approximately 20 acres of existing property and its associated herbaceous habitats. The landscape of the proposed action would be altered by clearing/grubbing, grading, and fill associated with project construction. The construction/grading plan will be performed in accordance with standard engineering guidelines and practices. Temporary impacts are also expected in areas surrounding the construction site. However, these areas would be restored and revegetated upon project completion. Other areas not affected by permanent buildings, parking areas, roads, detention basin, or entrance areas may also be affected. These areas would include the landscape and lawn areas. Direct impacts are expected in these areas as well and would not be returned to native vegetation. All temporarily disturbed areas will be restored and revegetated upon project completion. Since no other development tangential to the proposed project design is anticipated, no cumulative impact to aquatic resources, existing habitats, topography, physiography, geological features, or soils are anticipated. A stormwater management plan will be prepared and implemented to minimize runoff to the greatest extent practicable during construction.

The NAA would result in no development at this property. None of the facilities contemplated under PAA would be constructed and environmental conditions would remain unchanged.

### **3.2 Social and Economic Conditions**

The U.S. Census Bureau Website was used to identify the social and economic characteristics at the county level. *Table 1* summarizes the 2019 census estimates for socioeconomic information for Carter County, Oklahoma.

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Table 1 YEAR 2019 DEMOGRAPHIC ESTIMATES CARTER COUNTY		
<b>Population</b>		
Population estimates, July 1, 2019, (V2019)	48,111	
<b>Age and Sex</b>		
Persons under 5 years, percent	6.8%	
Persons under 18 years, percent	25.1%	
Persons 65 years and over, percent	16.8%	
Female persons, percent	51.3%	
<b>Race and Hispanic Origin</b>		
White alone, percent	75.0%	
Black or African American alone, percent	6.9%	
American Indian and Alaska Native alone, percent	10.0%	
Asian alone, percent	1.4%	
Native Hawaiian and Other Pacific Islander alone, percent	0.1%	
Two or More Races, percent	6.7%	
Hispanic or Latino, percent	7.6%	
White alone, not Hispanic or Latino, percent	69.5%	
<b>Population Characteristics</b>		
Veterans, 2014-2018	3.21%	
Foreign born persons, percent, 2014-2018	3.1%	

### **Environmental Consequences**

The PAA may temporarily increase noise affecting people living nearby, however this will be short term in nature. The proposed action is expected to provide a temporary benefit to the surrounding population due to the expansion of businesses and economic opportunities that may not have otherwise been provided. Workforce expansion in the Ardmore area is also expected to increase slightly associated with the additional skilled, administrative, and maintenance staff. Local business may also experience increased sales opportunities tangential to construction and operation of the new cemetery that provide related products may experience an increase in sales in the general area as workers travel back and forth to the proposed facility. Positive benefits to micro-level socio-economics are anticipated. No adverse impacts are expected.

The NAA would result in no effects on the current conditions of this review factor. None of the facilities contemplated under PAA would be constructed and environmental conditions would remain unchanged.

### **3.2.1 Environmental Justice**

Executive Order (EO) 12898 “Federal Actions to Address Environmental Justice in Minority and Low-Income Populations” (February 11, 1994) states that if possible, no federal actions should place any adverse environmental, economic, social, or health effects on minority or low-income groups. The proposed action is located on ODVA-owned land. The property is not occupied nor does it have any residential development. No displacements would result because of the proposed action.

According to the poverty guidelines published by the US Department of Health and Human Services (HHS), the 2019 HHS poverty guidelines for a family of four with an annual household income of \$25,750 is considered to be the poverty level. An annual income of \$12,490 is considered to be the

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poverty level for an individual. The HHS Poverty Guidelines are published annually and reflect the poverty conditions for the previous year (Federal Register, 2019)).

### **Environmental Consequences**

The PAA would not have any significant adverse effects to any persons; therefore, no minority group or low-income families would be disproportionately affected.

The NAA would not result in any disproportionate negative impacts on minority or low-income populations.

### **3.2.2 Protection of Children**

Executive Order 13045 pertains to “Protection of Children for Environmental Health and Safety Risks”, April 21, 1997. This mandate requires that federal agencies are to identify and assess environmental health and safety risks that may affect children. EO 13045 states that to the extent permitted by law and appropriate, each federal agency shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children and ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. The project is located in a rural area with very few homes in the general vicinity and is situated adjacent to a US highway. No children will be allowed to enter the action area during construction. The proposed facility has been designed and will be constructed with the standard safeguards for children.

### **Environmental Consequences**

The PAA will not disproportionately affect the safety or health of children and will be in full compliance with Executive Order 13045. In conformance with the EO, children will be restricted from or near the construction areas associated with the proposed action. All construction areas would be restricted on a short-term basis from general public access. The project is located in a developed suburban area with multiple homes in the general vicinity and is situated adjacent to a major arterial street. No children will be allowed to enter the action area during construction. The proposed facility has been designed and will be constructed with the standard safeguards for children.

The NAA would not cause impacts on the human environment. Therefore, there would be no negative impacts relative to this public interest review factor.

## **3.3 Natural Resources**

### **3.3.1 Soils**

The Web Soil Survey for Carter Sequoyah County was used to broadly assess the soils within the proposed action area. Four soil units identified were identified within the proposed action area. The mapped soil series Normangee loam, 3 to 5% slopes, Wilson Silt loam, 0 to 1% slopes, Durant loam, 1 to 3% slopes, and Pulaski-Bunyan soils, 0 to 1% slopes. Onsite field surveys confirmed accurate soil mapping across the survey area.

### **Environmental Consequences**

The PAA will disturb approximately 19 acres of soil. The disturbance of soil and construction activities associated with the proposed project will be performed in accordance with the standard best management practices (BMP's). Best Management Practices are used to minimize soil erosion and sedimentation from construction while the site undergoes removal of the soil, transporting soil and

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vegetation and compacting and re-grading the site. Silt fencing and hay bale barriers should be installed down gradient of areas of disturbance to dissipate velocities of surface water runoff and trap fugitive sediment. Appropriate measures will be implemented to ensure the introduction or expansion of noxious and or invasive weeds are avoided and minimized. Seed would be planted in the fall and over seeded in the following spring and repeated as necessary until the disturbed soils become protected by at least an 80% coverage of vegetation.

The NAA would not cause impacts to the existing soils. Therefore, there would be no negative impacts relative to this public interest review factor.

### **3.3.1.1 Farmland Soils**

The Natural Resource Conservation Service (NRCS) administers the Farmland Protection Policy Act (FPPA 1981) to ensure that federal programs minimize unnecessary and irreversible conversion of farmland soils to nonagricultural uses. The NRCS Web Soil Survey was accessed to identify the presence of any farmland soils on upland areas adjacent to the proposed action. No prime farmland soils were identified within the proposed action area based on coordination with the Natural Resources Conservation Service (NRCS) Web Soil Survey. The response from the NRCS is provided in *Appendix B*.

#### **Environmental Consequences**

Although the PAA would disturb approximately 19 acres of soil, none of onsite soils are considered prime farmland soils. No other easements relative to the Farm Protection Policy Act have been identified by NRCS. Therefore, the FPPA does not apply. Documentation from the NRCS is provided in *Appendix B*.

The NAA would not impact farmland soils. Therefore, there would be no negative impacts relative soils protected under the FPPA.

### **3.3.2 Wild and Scenic Rivers**

The National Park Service Website was used to identify any wild and scenic rivers within or near the proposed action (National Park Service, 2012).

#### **Environmental Consequences**

No waterways classified as wild and scenic pursuant to the Federal Wild and Scenic Rivers Act, Public Law 90-542 are located within the proposed action.

The NAA would not affect any wild or scenic rivers.

### **3.3.3 Vegetation**

Executive Order 13112, signed by President Clinton on February 3, 1999, requires that a Council of Departments dealing with invasive species be created to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive. Invasive species are plants that grow and have a relatively higher probability of growing in areas of soil disturbance. The aggressive spread of these species can interfere with growth of native species. The NEPA study area is approximately 19 acres in size. The dominant vegetation identified within the action area consisted of Bermuda grass (*Cynodon dactylon*), henbit (*Lamium amplexicaule*), dandelion (*Taraxacum officinale*), Johnson grass (*Sorghum halepense*), and yarrow (*Achillea millefolium*). The dominant within the forested riparian zone adjacent to the unnamed tributary was

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comprised of green brier (*Smilax rotundiflora*), pecan (*Carya illinoensis*), poison ivy (*Toxicodendron radicans*), Chinese privet (*Ligustrum sinense*), Japanese honeysuckle (*Lonicera japonicum*), dewberry (*Rubus caesius*), American sycamore (*Platanus occidentalis*), eastern red cedar (*Juniperus virginiana*), and water oak (*Quercus nigra*). Woody species were present adjacent to the survey area and associated with the forested floodplain (which will not be affected).

### **Environmental Consequences**

No invasive species were observed within the action area. Removal of primarily herbaceous and very limited woody vegetation would result from construction of the PAA. Approximately 19 acres of herbaceous vegetation will be affected by the proposed project and will be permanently altered from their current condition. The PAA design plan was modified from the identified alternative design to reduce the overall facility footprint and impacts to vegetated areas. Compensatory mitigation (replacement) to offset these impacts does not appear realistic and is not proposed. However, revegetation of the temporarily disturbed and ultimately restored areas is proposed as compensatory mitigation (**Section 5.0**).

The NAA would allow vegetative species to persist in or flourish from their current state. Therefore, no negative impacts are expected.

### **3.3.4 Water Resources**

#### ***Surface Water***

The Ardmore West, OK USGS topographic map indicates one intermittent stream is located adjacent to the survey area. No streams or wetland areas are present in the action area. The waters of the US delineation report of survey provides the descriptions, characteristics, and photographs of the identified aquatic resources adjacent to the PAA and is provided at **Appendix C**.

### **Environmental Consequences**

No open or flowing aquatic resources were identified within the action area. No impacts are anticipated to surface water resources. The proposed project design plan was situated within the project area to avoid impacts to waters of the US.

#### ***Groundwater***

Major groundwater basin (aquifer) is defined as a distinct underground body of water overlain by contiguous land and having substantially the same geological and hydrological characteristics and from which groundwater wells yield at least fifty (50) gallons per minute on the average basin-wide if from a bedrock aquifer and at least one hundred fifty (150) gallons per minute on the average basin-wide. Minor groundwater basin (aquifer) is defined as a distinct underground body of water overlain by contiguous land and having substantially the same geological and hydrological characteristics and which is not a major groundwater basin.

### **Environmental Consequences**

The proposed action area is not located within any major or minor aquifers based on the Oklahoma Water Resources Board aquifer map. Based on the evaluation of groundwater resources, aquifer locations and characteristics, the PAA will result in minimal disturbance of land within the local watershed. The change in land use associated with this project should have a negligible, if any, effect on groundwater resources or aquifer recharge.

No surface or subsurface water resources would be affected resultant from the NAA.

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### ***Public Water Supplies***

The Oklahoma Department of Environmental Quality's Data Viewer was used to broadly assess the presence of public water supplies wells, public water supply intakes, and wellhead protection areas that may be affected by the proposed action.

### **Environmental Consequences**

No public water supply systems would be affected by the PAA.

The NAA would not affect public water supply systems. Therefore, there would be no negative impacts relative to this public interest review factor.

### ***Sole Source Aquifers***

The United States Environmental Protection Agency's website was used to identify the location of any sole source aquifers. No sole source aquifers are located within or near the PAA.

### **Environmental Consequences**

No impacts to sole source aquifers would occur as a result of the PAA.

The NAA would not affect this resource.

### **3.3.5 Floodplains**

The protection of floodplains and floodways is required by Executive Order 11988 to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains to avoid direct or indirect support of floodplain development. Coordination with the Oklahoma Water Resources Board determined that Sequoyah County participates in the National Flood Insurance Program (NFIP). The Federal Emergency Management Agency's (FEMA) website was used to determine whether any floodplains were located within the proposed action. The proposed action is located outside the FEMA designed 100-year floodplain and shown on **Figure 7**. None of the proposed action area is located within the 100-year floodplain.

### **Environmental Consequences**

The PAA will not disturb or be situated in any portion of a mapped 100-year floodplain. All work associated with the proposed action would conform to applicable state or local floodplain protection standards if required. Carter County participates in the National Flood Insurance Program; however, no concerns have been presented by the appropriate regulatory agency.

The NAA would not impact any mapped floodplain areas.

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### **3.3.6 Wetlands**

The United States Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (USACE 2010) were referenced in concert to identify wetlands. Wetland areas, if observed, were to be identified using the routine on-site (level 2) method, as described in Section D of the 1987 USACE Wetlands Delineation Manual. The identification of wetlands consists of a three-parameter approach that involves determining the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Where differences in the two documents occur, the Regional Supplement takes precedence over the 1987 Corps Manual for applications in the applicable Region. A survey for wetlands was performed within the proposed action area. The Waters of the US report of survey detailing the onsite evaluation is provided in *Appendix C*.

### **Environmental Consequences**

No wetlands were identified and delineated within the action area.

There would be no impacts to existing wetlands under the NAA.

### **3.3.7 Fish and Wildlife**

The species of wildlife expected to use, be present within, or adjacent to the proposed action area may include such species as white-tailed deer (*Odocoileus virginianus*), cottontail rabbit (*Sivillagus floridanus*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), and skunk (*Mephitis mephitis*). Various avian species comprised of raptors, waterfowl, neo-tropical migrants, as well as a variety of herpetofauna including cottonmouth (*A. piscivorus*), water snakes (*Nerodia sp.*), amphibians, salamanders, lizards, skinks, terrapins and turtles are present in and/or migrate through the general area. Predatory mammals including the coyote (*Canis latrans*) or bobcat (*Lynx rufus*) are expected to be low due to the minimal availability of suitable habitat which has been previously displaced by suburban development adjacent to and surrounding the action area

### **Environmental Consequences**

The PAA is not expected to cause impacts to aquatic species since no open surface waters will be affected. Animal species and their respective uses are expected to be varied, opportunistic, and relative to the preferred or utilized habitats for each. Based on the observed habitat characteristics, the most predominant species expected to be present or utilize the proposed action would consist of small mammals and birds. The diversity of bird species varies between summer and winter migrants however, no nests were observed. Predatory or omnivorous animals such as coyote, skunk, raccoon, and snakes are expected to be very low. The habitat quality is subjectively described as poor relative to the wide range of species known to occur within or adjacent to the project area. Avian species utilize the action area and appears to be relegated primarily to neo-tropical migrants and raptors during foraging. It should be noted the quality of habitat for most song birds appears poor.

Ground nesting species were not observed and are not expected in any consistent appreciable extent or numbers based on the vegetation types and structure – being improved grasses and low forb diversity. Ground-dwelling rodents and their evidence were observed within the action area. Suitable forage and cover for both birds and small mammals are provided by seed producing herbaceous vegetation. Herpetofauna may utilize the action area but the existing habitat appears to limit the species diversity and possible densities based on the maintained herbaceous vegetation and near non-existent low shrub cover. The available habitats for these species would include herbaceous fields, drainage channels, upland hillsides, wetland areas, and along the ephemeral waterway (which is outside the proposed construction area - and may provide refuge for escaping species. Based on this assessment, the overall

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impacts to terrestrial species are expected to be minor and minimal. The majority of the terrestrial species should be able to flee the proposed work areas prior to construction. No effective nesting habitat for avian species was observed. Since the majority of the prospective construction operations would occur on upland areas, adverse impacts to aquatic species are not anticipated.

Under the No-Action Alternative, terrestrial and aquatic species would not be affected.

### **3.3.8 Threatened and Endangered Species**

In accordance with the Endangered Species Act of 1973, Federally-listed threatened and endangered species were identified for the proposed action area. The official list of threatened and endangered species potentially present within or adjacent to the proposed action was generated by the United States Fish and Wildlife Service's on-line Information, Planning, and Conservation (IPaC) decision support system (USFWS, 2020). EEC conducted field surveys to evaluate the existing habitats and determine the potential for species presence. A biological assessment was prepared identifying the life cycle and habitat requirements for each species, discusses the anticipated impacts as well as effect determinations and is located in **Appendix D. Table 3** below provides a summary of the listed species known to occur in or migrate through Carter County, OK, their listing status, habitat requirements, and identification of observed habitats relative to each species:

Table 3 - Federally Listed T&E Species			
Species/Critical Habitat	Listing Status	Habitat Requirements	Status within Action Area
American Burying Beetle ( <i>Nicrophorus americana</i> )	Endangered	Breeding habitat: undisturbed, mature oak-hickory forests with substantial litter layers and deep, loose soils over grasslands or bottomland forests. Feeding habitat: undisturbed grasslands, grazed pasture, riparian zones, and oak-hickory forest, as well as a variety of various soil types.	Suitable habitat was not identified within the project area.
Least Tern ( <i>Sterna antillarum</i> )	Endangered	Islands or sandbars along large rivers, mostly clear of vegetation for nesting and loafing and with water nearby for fishing.	No suitable nesting or foraging areas were observed.
Piping Plover ( <i>Charadrius melodus</i> )	Threatened	Migratory stopover habitat includes sparsely vegetated sandy or gravelly shorelines and islands associated with the major river systems. Species does not nest in OK.	No suitable foraging habitat present within the project corridor.
Red Knot ( <i>Calidris canutus rufa</i> )	Threatened	Coastal areas, mudflats on lakes or reservoirs, and may use sandbars along the major river systems for forage and resting areas. Species does not nest in OK.	No suitable habitat was identified within the project corridor.
Whooping Crane ( <i>Grus americana</i> )	Endangered	Foraging habitat includes a variety of wetland and other habitats, including coastal marshes and estuaries, inland marshes, lakes, ponds, wet meadows and rivers, and agricultural fields. Whooping cranes breed and nest in wetland habitat in Wood-Buffalo National Park, Canada.	No suitable habitat for this species was identified within the action area. The Oklahoma Ecological Field Office reports that there is final critical habitat. The survey location is outside the critical habitat.

### **Environmental Consequences**

Suitable habitat is present for the American Burying Beetle (ABB) adjacent to the action area, however said area will not be affected. The PAA does not contain suitable ABB habitat and should result in a No Effect determination. Based on the lack of suitable habitat, the proposed action would not affect the Least Tern, Piping Plover, Red Knot, or Whooping Crane. No species occurrence records within the

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action area received from the Oklahoma Natural Heritage Inventory have been documented within or near the action area (*Appendix D*). The Species Conclusion Table (*Table 4*) below provides the documentation and rationale relative to the federally-listed species:

The attached biological assessment provides the detailed discussion of threatened and endangered species life cycle and habitat requirements as well as the rationale supporting the determination of effect. The species conclusion table below is provided as a synopsis for the determinations of effect for each of the federally listed species (*Table 4*):

Table 4 - Species Determination of Effect			
Species/Critical Habitat	Habitat Determination	USFWS Consultation	ESA Determination
American Burying Beetle	No Suitable Habitat Present	Not Required	No Effect
Least Tern	No Suitable Habitat Present	Not Required	No Effect
Piping Plover	No Suitable Habitat Present	Not Required	No Effect
Red Knot	No Suitable Habitat Present	Not Required	No Effect
Whooping Crane	No Suitable Habitat Present	Not Required	No Effect

The NAA would not affect any federally-listed threatened or endangered species.

### **Bald Eagle**

Although the Bald Eagle (*Haliaeetus leucocephalus*) has been removed from the threatened and endangered species list, the eagle continues to be protected by the Bald and Golden Eagle Protection Act. Bald eagles are rather large raptorial birds measuring 3 feet in height with a 7-foot wingspan. The bald eagle prefers large trees or high cliffs along large waterways for perching and nesting purposes. Fish is the preferred diet of eagles, but they also eat small mammals, waterfowl, turtles and dead animals. Preferred foraging areas include quiet coastal areas, rivers or lakeshores with large tall trees.

### **Environmental Consequences**

Potential or suitable nesting or fishing habitat was not identified within the action area. No Bald Eagles or nests were observed during the onsite surveys. The PAA would not affect the Bald Eagle.

The NAA would not affect the Bald Eagle.

### **Migratory Birds**

Executive Order 13186 refers to the responsibility of federal agencies to protect migratory birds. Migratory bird species are protected under the Migratory Bird Treaty Act (MBTA) as amended. The MBTA prohibits the take of any migratory bird without authorization for the USFWS.

### **Environmental Consequences**

Very limited and/or low-quality suitable nesting habitat for neo-tropical migratory birds may be present within the action area however no nests were observed. Foraging habitats also appeared to be minimal

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and of relatively low quality. Higher quality habitat for nesting migratory birds was observed in areas surrounding the project locality. No raptor (birds of prey) nesting or perching habitat is present. Construction is encouraged to occur between August 15 and March 31 to avoid the nesting season to avoid potential impact to migratory birds. No adverse impacts to migratory birds are expected as a result of the PAA.

The NAA would not affect migratory birds.

### **3.3.9 Cultural Resources**

Section 106 of the National Historic Preservation Act of 1966, as amended, protects those properties that are listed or eligible for listing in the National Register of Historic Places (NRHP). The Oklahoma Archeological Survey (OAS) stated by letter (January 2020) that no sites are listed as occurring within the proposed action area. Based on the topographic and hydrologic setting, no archeological field inspection was considered necessary. The environmental review was done in cooperation with the State Historic Preservation Office, Oklahoma Historical Society. The Oklahoma Historical Society (OHS) reviewed the documentation concerning the proposed action and determined that there are no historic properties affected by the referenced project. The Osage Nation requested a cultural resources study be conducted at the subject site. The project proponent completed the requested survey and provided a copy of the report of survey to the Osage Nation, OAS, and OHS. The OAS, OHS, and Osage Nation each provided letters of report of survey concurrence that no resources or properties eligible for listing would be affected by the proposed project. Consultation documentation with these entities is provided in *Appendix B*.

#### **Environmental Consequences**

The PAA will not impact any known cultural resources. If such resources are inadvertently encountered, the ODVA will be notified and construction activities temporarily halted until appropriate coordination with OAS/OHS/Osage Nation can be initiated. **Section 5.0** provides coordination protocols for inadvertent discoveries.

The NAA would not impact cultural resources.

#### **3.3.9.1 Tribal Consultation**

Under 36CFR Part 800.3, native American tribes were identified that could have concerns regarding the proposed action. The U.S. Department of Housing and Urban Development Tribal Directory Assessment Tool was used to identify Native American Tribes that may have an interest in the proposed action area. Seven native American Indian tribes were sent letters concerning the proposed project as listed below:

- Alabama-Quassarte Tribal Town
- Osage Nation
- Apache Tribe of Oklahoma
- Wichita and Affiliated Tribes
- Cheyenne and Arapaho Tribes of Oklahoma
- Caddo Nation
- Muskogee (Creek) Nation

Letters sent to and received from the respective Native American tribes are provided in *Appendix B*.

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### ***Environmental Consequences***

Multiple tribal nations were provided scoping letters requesting their comments or concerns relative to the project area. The Osage Nation requested a cultural resources study be conducted. The results of the completed survey indicated no resources were found or would be affected. The Quapaw Nation was the only other tribal entity to have provided a response letter and stated no resources of concern would be affected. Inadvertent discoveries of historically-important tribal resources may occur during construction. The project proponent will cease construction activities if any such resources are accidentally discovered.

The NAA is not expected to result in adverse impacts to tribal resources.

### **3.3.10 Air Quality**

The Clean Air Act (CAA) requires the USEPA to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. Ambient air quality monitoring stations exist at various locations throughout Oklahoma. The NAAQS were established for ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>x</sub>), sulfur dioxide (SO<sub>x</sub>), and particulate matter (PM<sub>10</sub>) and (PM<sub>2.5</sub>). Areas that meet the national standards for the criteria air pollutants are in attainment. Areas that exceed the national standards are in nonattainment. Under the CAA, the EPA has classified air basins as being in attainment or nonattainment for each of the criteria pollutants and whether or not the standards have been achieved. Air quality in Oklahoma is measured and regulated by the Oklahoma Department of Environmental Quality, Air Quality Division (*Table 5*). Currently, Carter County, Oklahoma is in attainment with regard to the NAAQS with respect to the criteria pollutants CO, SO<sub>2</sub>, O<sub>3</sub>, NO<sub>2.5</sub>, PM<sub>10</sub>, and Pb.

Pollutant		Primary/Secondary	Averaging Time	Level
Carbon Dioxide		Primary	8-hour	9 ppm
			1-hour	35 ppm
Lead		Primary and Secondary	Rolling 3-month average	0.15 µg/m <sup>3</sup> <sup>(1)</sup>
Nitrogen Dioxide		Primary	1-hour	100 ppb
		Primary and Secondary	Annual	53 ppb <sup>(2)</sup>
Ozone		Primary and Secondary	8-hour	0.075 ppm <sup>(3)</sup>
Particulate Pollution	PM <sub>2.5</sub>	Primary	Annual	12 µg/m <sup>3</sup>
		Secondary	Annual	15 µg/m <sup>3</sup>
		Primary and Secondary	24-hour	35 µg/m <sup>3</sup>
	PM <sub>10</sub>	Primary and Secondary	24-hour	150 µg/m <sup>3</sup>
Sulfur Dioxide		Primary	1-hour	0.075 ppb <sup>(4)</sup>
		Secondary	3-hour	0.5 ppm

1. Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m<sup>3</sup> as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

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2. The official level of the annual NO<sub>2</sub> standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.
3. Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over three years) and related implementation rules remain in place. In 1997, USEPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard (“anti-backsliding”). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to one.
4. Final rule signed June 2, 2010. The 1971 annual and 24-hour SO<sub>2</sub> standards were revoked in that same rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved. Source: USEPA Office of Air and Radiation, 2015.

### Environmental Consequences

The PAA is located in Carter County which is classified as **in attainment** with regard to the NAAQS pollutants. No adverse impacts are expected.

### Construction Related Emissions

The proposed project would generate local temporary short-term direct impacts on air quality during construction. Sources of dust will be generated from vehicular traffic and construction-related equipment (trucks, scrapers, and excavators). The emission levels of the anticipated construction equipment are expected to be minimal based on the relatively few numbers of construction equipment needed to accomplish the construction process. The EPA has the following recommendations to implement regarding the construction period of the project:

- Use ultra-low sulfur fuel (< 15 ppm) in all diesel engines.
- Use add-on controls such as catalysts and particulate traps where suitable.
- Minimize engine idling (e.g., 5-10 minutes/hour).
- Use equipment that runs on clean, alternative fuels as much as possible.
- Use updated construction equipment that was either manufactured after 1996 or retrofit to meet the 1996 emissions standards.
- Prohibit engine tampering and require continuing adherence to manufacturers’ recommendations.
- Maintain engines in top running condition tuned to manufacturers’ specifications.
- Phase project construction to minimize exposed surface areas.
- Reduce speeds to 10 and 15 mpg in construction zones.
- Conduct unannounced site inspections to ensure compliance.
- Locate haul truck routes and staging areas away from sensitive population centers.

The project proponent or their selected contractors will implement dust control measures that will effectively eliminate and or minimize dust during construction activities. No long term or adverse impacts are anticipated

### Operational Related Emission

Criteria emission sources during operation of the proposed project will occur. Minor increases may result during times of increased traffic at the proposed Veterans Cemetery; however, these periods are expected to be brief and intermittent enough to allow sufficient time for atmospheric assimilation. No adverse impacts are anticipated as a result of the PAA.

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Under the NAA, no earth disturbing activities would occur and no emissions would result which would affect air quality, increase emissions, or climatological patterns.

### **3.3.11 Hazardous Materials**

In February 2020, a Phase 1 Environmental Site Assessment (ESA) was performed within the proposed action area for recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to any release to the environment under conditions indicative of a release to the environment or under conditions that pose a material threat of a future release to the environment. Environmental Data Resources, Inc. (EDR) conducted a search of state and federal environmental database records. The searches met the specific requirements of ASTM Standard Practice for Environmental Site Assessments.

#### **Environmental Consequences**

Two residential and no commercial structures were identified within the action area.

The property has no obvious land use and there were no improved roadways. The property is covered with herbaceous vegetation. The vegetation across the property was homogeneous with no evidence of distressed vegetation. One petroleum storage tank was identified but no leakage was observed. No areas of concern were identified through state and federal database research. No known Recognized Environmental Conditions were identified. No sites or environmental issues were identified within the proposed action area in any of the databases searched by EDR. The assessment (EEC, 2020) revealed no evidence of recognized environmental conditions. The Phase 1 ESA is provided at *Appendix E*.

The No-Action Alternative would not impact hazardous waste or materials.

### **3.3.12 Geology**

The Oklahoma Geological Survey was used to obtain the geologic environment within the proposed action area. The proposed action is located within the Ardmore Basin—Lowland of folded Mississippian and Pennsylvanian shales and sandstones. Basins in southern Oklahoma in the last half of the Mississippian rapidly subsided, resulting in thick sedimentary deposits that consist predominantly of shale, with layers of limestone and sandstone. Principal Mississippian formations in southern Oklahoma (excluding the Ouachita Mountains) are the Caney Shale, Goddard Formation, and Springer Formation (which is partly Early Pennsylvanian): these and the underlying Sycamore Limestone are 1,500–6,000 ft thick in the Ardmore and eastern Anadarko Basins and nearby areas. The greatest thickness of Mississippian strata is 10,000 ft of interbedded sandstone and shale of the Stanley Group in the Ouachita Basin. Most Mississippian strata in central and north-central Oklahoma were eroded during the Early Pennsylvanian. In the western Anadarko Basin, Mississippian strata consist of cherty limestones and shales 3,000 ft thick, thinning to 200–400 ft east of the Nemaha Uplift.

#### **Environmental Consequences**

Based on the surficial earth disturbing activities associated with the PAA, no geologic resources would be directly or indirectly affected. No deep boring or excavation is required for structural support. All building footers and roadway bases are expected to be associated with relatively shallow excavation.

The No-Action would not impact geologic resources.

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### **3.3.13 Climate Change**

Climate change is an important national and global concern. There is general agreement that the earth's climate is currently changing and anthropogenic (human-caused) greenhouse gas (GHG) emissions have been documented as contributing to this change. Carbon dioxide (CO<sub>2</sub>) makes up the largest anthropogenic component of these GHG emissions. However, there is no scientific methodology for attributing specific climatological changes to a particular project's emissions. The CEQ GHG emissions guidance requires action agencies to consider: (1) The potential effects of a proposed action on climate change as indicated by assessing GHG emissions (e.g., to include, where applicable, carbon sequestration); and, (2) The effects of climate change on a proposed action and its environmental impacts.

This guidance recommends agencies quantify a proposed agency action's projected direct and indirect GHG emissions; use projected GHG emissions (to include, where applicable, carbon sequestration implications associated with the proposed agency action) as a proxy for assessing potential climate change effects; recommends agencies include a qualitative analysis and explain the basis for determining that quantification is not reasonably available because tools, methodologies, or data inputs are not reasonably available to support calculations for a quantitative analysis; discusses methods to appropriately analyze reasonably foreseeable direct, indirect, and cumulative GHG emissions and climate effects; considers reasonable alternatives for short- and long-term effects and benefits in the alternatives and mitigation analysis; advises agencies to use available information rather than undertaking new research, and provides examples of existing sources of scientific information; recommends using information developed during the NEPA review to consider alternatives that would make the actions and affected communities more resilient to the effects of a changing climate; outlines special considerations for agencies analyzing biogenic carbon dioxide sources and carbon stocks associated with land and resource management actions under NEPA; and using the agencies expertise and experience to consider an environmental effect and prepare an analysis based on the available information.

### **Environmental Consequences**

Greenhouse gas emissions from construction of the PAA would be minor and similar to other small construction projects. Operation of the proposed Veterans Center would have a net decrease on greenhouse gas emissions, as operation of the current aging facility would be replaced by a new facility that operates with more modern and efficient systems. Therefore, no emissions significantly contributing to climate change would occur. Ecological changes in Oklahoma due to climate change are predicted to include warming temperatures and increased severity of both floods and drought over the next several decades. These changes are not expected to affect the need for, viability of, or environmental impacts of the PAA

Under the NAA, no greenhouse gas emissions or impacts to or from climate change would occur.

### **3.3.14 Community Services**

Community services are identified as providers of fire, police, and medical emergency services having jurisdiction within or surrounding the PAA property. Potential impacts could include disruption of service, site access prevention, and/or creating situations where traditional transportation routes or increased response times could occur – temporary or permanent. Impacts to said services could also result from the PAA by placing a greater burden on service providers directly attributed to response needs for which the providers are not currently staffed at sufficient levels to serve the PAA. Community services not relevant to PAA would include schools, libraries, housing, and are not expressly considered as part of this assessment.

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### **Environmental Consequences**

The PAA is situated adjacent to a primary, 4-lane, arterial street (Myall Street) servicing the travelling public in the City of Ardmore. No service disruptions, access restrictions, transportation route modifications to the PAA or changes which would alter emergency service response times beyond the PAA are expected to occur as a result of the PAA. Increased burden on medial responders, law enforcement and/or fire services are not anticipated based on their current force sizes relative to the community demands and coverage. Multiple police units and fire stations as well as volunteer staffing are expected to be in sufficient number to adequately address emergency situations. It should be noted, the occurrence of multiple simultaneous emergency situations cannot be predicted, expected, or calculated and should not be considered a function of the PAA potentially creating such hardship on community service providers during extreme crime, emergency, and/or disaster events. In such extreme situations, additional nearby or adjacent county service support providers would be available to assist the primary providers. No adverse impacts to community services are expected to occur as a result of the PAA.

The NAA would not alter the currently-provided community services.

### **3.3.15 Transportation and Parking**

The potential effect on transportation facilities relative to the PAA could include increased local traffic on an infrequent and temporary basis during funeral processions. However; such occurrences would be escorted by military and/or police vehicles to provide additional safety during periods of interrupted traffic flow patterns

### **Environmental Consequences**

The PAA is situated adjacent to a primary, 4-lane, arterial street servicing the travelling public and has been designed to accommodate expected traffic volumes and levels well into the future based on the standard roadway design requirements. No public parking areas are present within or near the existing property which would be affected by competing parking needs. Ample parking associated with the PAA has been incorporated into the overall facility design to accommodate expected transportation and parking needs. No impacts relative to these public interest review factors are expected to result from the PAA.

The NAA would not affect current transportation or parking patterns.

### **3.3.16 Utilities**

Public utilities required to support the PAA would include water, sewer, natural gas, electricity, and/or telecommunications services. Based on the engineering design, survey information, and adjacent businesses requiring the same utilities, all services appear currently available adjacent to the PAA. Connection to said utilities to support the PAA would be available without additional construction activities to bring services to the PAA.

### **Environmental Consequences**

Services are located adjacent to the PAA within the existing rights of way and/or easements along Mayll Street. Size increases are not expected to the existing services resulting from the PAA. Installation of new utility services onsite may occur as a result of the PAA. No existing system upgrades have been identified as necessary to support the PAA. No adverse impacts are expected to occur relative to this public interest review factor.

The NAA would not cause impacts on existing utility systems.

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### **3.3.17 Potential for Generating Substantial Controversy**

The PAA is associated with a new cemetery to address the needs of providing sufficient and appropriate interment for veterans. The City of Ardmore and Oklahoma Department of Veterans Affairs evaluated the potential for this public interest review factor during the site selection process and no issues were identified or discovered.

### **Environmental Consequences**

No issues of potential controversy were identified nor are they expected based on development of the PAA.

The NAA would not result in substantial controversy.

### **3.5 Cumulative Effects**

Three types of impacts are routinely assessed with proposed federal actions and are defined by the Council on Environmental Quality (CEQ) regulations (40 CFR § 1500-1508). Direct impacts are defined as effects that are caused by the action and occur at the same place and time. Indirect impacts are defined as effects that are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth induced effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems (40 CFR § 1508.8). Direct and indirect impacts have been addressed throughout this section.

Cumulative impacts are defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other action (CFR 40 § 1508.7). Cumulative impacts include the direct and indirect impacts of a project together with the reasonably foreseeable future actions of others.

The cumulative impacts that result from an action may be undetectable but can add to other disturbances and eventually lead to a measurable environmental change. The assessment of cumulative impacts is required by the CEQ. For any given resource, a cumulative impact would only potentially exist if the resource were also directly or indirectly impacted by the proposed action. The anticipated direct, indirect, and cumulative impacts identified as a potential result of the PAA are discussed in Section 3.6 below. No other ongoing or reasonably foreseeable future actions were identified in the vicinity of the PAA that may affect environmental resources, thus no cumulative impacts would occur.

### **3.6 IMPACT SUMMARY**

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The following provides the evaluation rationale and the potential need for mitigation to avoid, minimize, or offset expected impacts relative to the level of affect for the referenced resources:

#### **Resource Impact Analysis**

Those resources which have been identified as having potential adverse impacts are described below. **Table 7** identifies all environmental resources considered as well as the anticipated impact relative thereto. **Section 4.0** identifies the specific management and mitigation measures referenced in the discussions below.

#### ***Land Use***

No obvious land use was identified at the proposed action area. The PAA would result in conversion from non-use to use as a cemetery. The ODVA is the current landowner and has determined cemetery

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development would be the most appropriate use of the property. No cumulatively adverse land use effects have been identified or are expected.

### ***Soils***

The PAA would modify the topographic setting of the project site through grading and site preparation. Changes to the project area should not influence land resources in other areas. The PAA would follow all appropriate permitting procedures; therefore, implementation of the PAA would not result in cumulatively considerable adverse effects to land resources.

### ***Water Resources (Wetlands and Surface Waters)***

The PAA would not directly impact surface water sources but could indirectly affect receiving drainages associated with a temporary increase in sedimentation to the local watershed from stormwater runoff. However, with the implementation of a storm water pollution prevention plan and use of best management practices, stormwater runoff would be minimized or prevented to avoid such impacts to the extent possible and not influence other areas of the local watershed. The PAA will comply with the Clean Water Act as it relates to stormwater (Section 402) discharges. No impacts are anticipated to surface or subsurface water resources. Mitigation measures would be employed to avoid and minimize impacts to surface water features.

### ***Vegetation***

All disturbed soils will be restored upon site grading or facility completion to restore site coverage to reduce or prevent soil erosion or sedimentation. Native herbaceous species will be required to revegetate disturbed areas not designated for lawn or facility grounds.

### ***Biological Resources (Fish and Wildlife Resources and Threatened/Endangered Species)***

The project area does not contain any unique or sensitive ecosystems or biological communities. Future utilization of the action area would be diminished or precluded upon cemetery completion. Terrestrial and aquatic species would be able to move to adjacent areas with unrestricted access. Herbaceous terrestrial habitat would be removed or overlain by the PAA but the activities should not result in adverse cumulative effects to any aquatic or terrestrial species.

### ***Cultural Resources***

Protection measures for potential impacts to unknown cultural resources that may be inadvertently discovered have been included in **Section 4.0** and will be implemented as mitigation measures, and similar measures would be required for any development in the vicinity of the project site. No cumulatively considerable adverse effects to cultural resources would occur as a result of the proposed action.

### ***Air Quality***

Cater County is in attainment for criteria pollutants established by the EPA. Future development near the project site would be subject to state and federal regulations; therefore, no cumulatively considerable adverse effects to air quality are anticipated. Mitigation measures will be required and employed during construction to minimize expected, albeit temporary impacts, associated with construction equipment emissions.

### ***Hazardous Materials***

Preventative maintenance measures will be required of the construction contractor(s) to ensure all equipment is in proper condition and does not result in leakage of fuels or lubricants. Storage of all fuels and lubricants onsite will be restricted to specific areas where precautionary and preventative

## ENVIRONMENTAL ASSESSMENT

measures or site management practices can be employed to capture accidental spills or leakages. Equipment storage areas providing similar leakage/spill capture will also be specified for machinery not actively used.

**Table 6** presents a comparison of potential impacts to the social and natural environment.

<b>Table 6 – Impact Summary Matrix</b>						
Environmental Resource	Beneficial Impact	No Impact	Minimal Adverse Impact	Adverse Impact	Significant Adverse Impact	Mitigation Measure(s) Proposed
Land Use		•				
Social Environment	•					
Economic Environment	•					
Aesthetics		•				
Environmental Justice		•				
Protection of Children		•				
Soils			•			•
Farmland		•				
Floodplains		•				
Wetlands		•				
Surface Water (Water Quality)		•				
Groundwater		•				
Vegetation			•			•
Fish and Wildlife			•			•
Threatened and Endangered Species		•				
Cultural Resource		•				•
Air Quality			•			•
Hazardous Material			•			•
Geology		•				
Cumulative Impacts		•				

### 4.0 MANAGEMENT AND MITIGATION MEASURES

Mitigation is defined by CFR 1508.20 as:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.

## ENVIRONMENTAL ASSESSMENT

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- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
  - (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
  - (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
  - (e) Compensating for the impact by replacing or providing substitute resources or environments.
- Mitigation measures to be implemented during construction of the PAA are summarized below.

### **Water Quality**

Mitigation measures will be implemented as part of the design and construction of the PAA to reduce impacts resulting from stormwater runoff. The project proponent will comply with all requirements of the Clean Water Act as required by the state Water Quality Certification (Section 401), the National Pollutant Discharge Elimination System (NPDES) as required by Section 402. Required permit authorizations have been or would be obtained prior to construction to ensure impact avoidance and/or minimization as well as regulatory compliance.

### **Air Quality**

The project proponent or their contractor will prepare a dust control plan to minimize fugitive dust generated from construction. These measures may include stabilization of exposed earth with vegetation, mulch, pavement, or other cover as early as possible, application of stabilization agents such as water, covering of any stockpiled material, and the use of covered haul trucks. Proactive dust control measures will effectively eliminate and or minimize dust during construction activities to the extent possible.

### **Vegetation**

Mitigation measures will be implemented to restore any affected environment to its original or natural state to the extent practicable. The identified BMP's will be employed during all project phases. Vegetation removal would be required to construct the proposed action. Replacement of the affected vegetation is proposed and would be accomplished through installation of native herbaceous species providing the most benefit for wildlife, habitat, and aesthetics. A suggested planting ratio of native grass species to forbs should be 70% grasses and 30% forbs. The planting (seeding) rate would be determined based on the selected species and required aerial coverage. Depending on the seasonal timing of seeding, planting area slope, and topography, a light straw mulching (or mulch blankets) may be utilized to increase germination rates and disturbed soil stability. Additional compensatory mitigation measures are proposed to offset the expected temporary and/or permanent adverse impacts to fish, wildlife, and their habitat include:

- 1) Revegetation of exposed soil areas using native species;
- 2) Placement of silt fences, if practicable.

During all land disturbing activities, Best Management Practices (BMPs) would be followed to ensure sediment control. The sediment control devices are used primarily for the trapping of sediment as runoff leaves the area caused by storm water induced erosion.

The intent would be to prevent accelerated erosion to the extent practicable. The BMPs would be designed specific to the site and maintained during the construction process. The temporary control devices will be removed after vegetation is established.

### **Biological Resources**

Implementation of the following mitigation measure would ensure that the proposed action would avoid or minimize potential adverse effects to migratory birds and other birds of prey protected under the Migratory Bird Treaty Act (MBTA):

## ENVIRONMENTAL ASSESSMENT

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If construction begins during the nesting season for birds of prey and migratory birds (between February 1 and October 1), a preconstruction bird survey for nesting sites will be conducted within the project site no more than 14 days prior to commencement with construction activities. The qualified biologist will document and submit the results of the preconstruction survey in a letter to the ODVA within 30 days following the survey. If no active nests or roosts are identified during the preconstruction survey, then no further mitigation is required. If any active nests are identified during the preconstruction survey within the project site, a buffer zone will be established around the nests. A qualified biologist will monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. The biologist will demarcate the buffer zone with construction tape or pin flags within 100 feet of the active nest and maintain the buffer zone until the end of the breeding season or until the young have fledged. Guidance from the USFWS will be requested if establishing a 100-foot buffer zone is impractical if the nestlings within the active nest appear disturbed.

### **Cultural Resources**

In the event of an inadvertent discovery of archaeological resources shall be subject to Section 106 of the National Historic Preservation Act as amended (36 CFR 800), the Native American Graves Protection and Repatriation Act (NAGPRA)(25 USC 3001 et seq.), and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-mm). Specifically, procedures for post review discoveries without prior planning pursuant to 36 CFR 800.13 shall be followed. The purpose of the following mitigation measures is to minimize the potential adverse effect of construction activities to previously unknown archaeological or paleontological resources in the case of inadvertent discovery:

- All work within 50 feet of the potential archaeological find shall be halted until a professional archaeologist, or paleontologist if the find is of a paleontological nature, can assess the significance of the find.
- If any archaeological find is determined to be significant by the archaeologist, or paleontologist as appropriate, then representatives of the Tribe shall meet with the archaeologist, or paleontologist, to determine the appropriate course of action, including the development of a Treatment Plan, if necessary.
- All significant cultural or paleontological materials recovered shall be subject to scientific analysis, professional curation, and a report prepared by the professional archaeologist, or paleontologist, according to current professional standards.
- If human remains are discovered during ground-disturbing activities on Tribal lands, pursuant to NAGPRA, the Tribal Official and ODVA representative shall be contacted immediately. No further disturbance shall occur until the Tribal Official and ODVA representative have made the necessary findings as to the origin and disposition.
- If the remains are determined to be of Native American origin, the ODVA representative shall notify a Most Likely Descendant (MLD). The MLD is responsible for recommending the appropriate disposition of the remains and any grave goods.

### **Hazardous Materials**

No hazardous materials or recognized environmental conditions were identified within the proposed action area. The PAA would not result in the removal of any oil and gas wells or associated features. All removed materials will be disposed of in accordance with all regulations. Accidental spills of petroleum products or hazardous materials spills could occur during construction of the PAA. The

## ENVIRONMENTAL ASSESSMENT

project proponent will require all contractors to report such accidental spills immediately upon notice of occurrence. The contractors will be made responsible for cleanup and/or removal of such spillage as well as contaminated soils, as deemed necessary by the project proponent.

### 5.0 AGENCY AND TRIBAL CONSULTATION

Appropriate federal, county, and state resource agencies and tribal nations were contacted to solicit views and provide input on the proposed project resources. Scoping letters requesting comments or pertinent information relative to the proposed project were sent to multiple regulatory and resource agencies as well as native American tribes having potential interest and are provided in *Appendix B*. The comments received with reference to the scoping letters are provided in *Table 7*.

<b>Table 7 - SUMMARY OF COMMENTS</b>	
Ms. Jonna Polk, Project Leader U.S. Fish and Wildlife Service 9014 E. 21st Street Tulsa, Oklahoma 74129	
<b>Comment:</b>	<b>Endangered Species Act Species List</b> Species identified for this proposed action include:  American Burying beetle ( <i>Nicrophorus americanus</i> ) Listing Status: Endangered  Least tern ( <i>Sterna antillarum</i> ) Listing Status: Endangered  Piping Plover ( <i>Charadrius melodus</i> ) Listing Status: Threatened  Red Knot ( <i>Calidris canutus rufa</i> ) Listing Status: Threatened  Whooping Crane ( <i>Grus Americana</i> ) Listing Status: Endangered
<b>Response:</b>	No comments received. Biological assessment prepared and determinations of effect included. No Effect Determinations reached for each listed species.
Mr. Jon A. Roberts, Senior Manager Office of External Affairs Oklahoma Department of Environmental Quality P.O. Box 1677 Oklahoma City, Oklahoma 73101	
<b>Comment:</b>	In response to your request, we have completed an environmental review of air, land and water records for the project listed below. While no environmental concerns under DEQ jurisdiction are anticipated, please be aware of the following regulatory requirement. Prior to beginning any construction activity disturbing more than one acre, you must submit an NOI and obtain authorization under OKR10, construction stormwater.
<b>Response:</b>	
Mr. J.D. Strong, Director Oklahoma Department of Wildlife Conservation	

## ENVIRONMENTAL ASSESSMENT

**Table 7 - SUMMARY OF COMMENTS**

PO. Box 53465 Oklahoma City, Oklahoma	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Mr. Robert Houston, Regional NEPA Coordinator U.S. Environmental Protection Agency 1445 Ross Avenue, Suite 1200 Dallas, Texas 75202	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Aaron Milligan, CFM, RPES Floodplain Management Planning & Management Division OKLAHOMA WATER RESOURCES BOARD 3800 N Classen Blvd, Oklahoma City, OK 73118	
<b>Comment:</b>	In response to your letter for comments; I'm sure you are aware of the floodplain at the west of this property. If any work will be done in the floodplain you must contact the City of Ardmore Floodplain Administrator, Jessica Scott.
<b>Response:</b>	Letter was provided to Ardmore FPA, no comment was received.
Dr. Kary Stackelbeck Oklahoma Archeological Survey University of Oklahoma Norman, Oklahoma 73019	
<b>Comment:</b>	No such properties are likely to be encountered and no field surveys are required. OAS concurs with cultural resource survey findings.
<b>Response:</b>	Comment noted.
U.S. Department of Homeland Security U.S. Federal Emergency Management Agency, Region IV Federal Insurance and Mitigation Administration 800 North Loop 288 Denton, Texas 76209	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Mr. Andrew Commer U.S. Army Corps of Engineers 1645 S. 101st East Ave Tulsa, Oklahoma 74127	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Mr. Brooks Tramell, Wetlands Program Coordinator Oklahoma Conservation Commission 2800 N Lincoln Blvd Oklahoma City, Oklahoma 73105	

## ENVIRONMENTAL ASSESSMENT

**Table 7 - SUMMARY OF COMMENTS**

<b>Table 7 - SUMMARY OF COMMENTS</b>	
<b>Comment:</b>	Based on our wetlands determination criteria there should be no significant impact on wetland resources in the area described.
<b>Response:</b>	A wetland and waterway delineation was conducted for the proposed action. No wetlands identified. The report of survey is provided in Appendix C.
Ms. Julie Cunningham, Executive Director Oklahoma Water Resources Board 3800 North Classen Blvd Oklahoma City, Oklahoma 73118	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Mr. David P. Brown, Associate Director Oklahoma Geological Survey University of Oklahoma 100 East Boyd Street N131 Norman, Oklahoma 73019	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Mr. Steve Glasgow, State Resource Conservationist U.S. Department of Agricultural Natural Resource Conservation Service Stillwater, Oklahoma 77074	
<b>Comment:</b>	Per your request, we have reviewed the subject project information and determined that the proposed project will not impact any easements, watersheds or prime farmland soils as defined by the Farmland Protection Policy Act.
<b>Response:</b>	Comment noted.
Director Jason Lewis U.S. Geological Survey Oklahoma Water Science 202 N.W. 66 <sup>th</sup> Street, Building 7 Oklahoma City, Oklahoma 73116	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Mr. Todd Fagin Oklahoma Biological Survey 111 E. Chesapeake Street Norman, Oklahoma 73019	
<b>Comment:</b>	We found no occurrences of relevant species within the vicinity of the project location as described.
<b>Response:</b>	Commented Noted. A biological assessment was prepared for the proposed action alternative and is provided in Appendix D.
Ashley Nealis North Central Regional Fisheries Supervisor Oklahoma Department of Wildlife Conservation 417 S. Silverdale Lane Ponca City, Oklahoma 74604	

## ENVIRONMENTAL ASSESSMENT

**Table 7 - SUMMARY OF COMMENTS**

<b>Comment:</b>	No comment received.
<b>Response:</b>	
Ms. Jane Lowe, Tribal Historic Preservation Officer Alabama-Quassarte Tribal Town Tribal Historic Preservation Office P.O. Box 187 Wetumka, Oklahoma 73883	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Dr. Andrea Hunter Director & Tribal Historic Preservation Officer The Osage Nation 627 Grandview Avenue Pawhuska, Oklahoma 74056	
<b>Comment:</b>	Thank you for reaching out to the Osage Nation, to help VA fulfill our legal responsibilities for tribal consultation regarding the proposed new State Veterans Cemetery in Ardmore, OK. Please move forward with the Cultural Resources Study as requested by the Osage Nation.  For VA awareness, I have copied the federal agency official who is responsible for NHPA compliance, George Eisenbach, the Director of the Veterans Cemetery Grants Program. I have also copied Ed Hooker, the NCA Historic Architect who coordinates their NHPA consultation program.
<b>Response:</b>	A cultural resource study was completed at the subject site. No resources were found. The Osage Nation provided concurrence letter. See Appendix B.
Ms. Shirley Lookingglass, THPO Apache Tribe of Oklahoma P.O. Box 1220 Anadarko, Oklahoma 73005	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Mr. Gary McAdams Tribal Historic Preservation Officer Wichita and Affiliated Tribes P.O. Box 729 Anadarko, Oklahoma 73005	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Ms. Virginia Richey, Tribal Historic Preservation Officer Cheyenne and Arapaho Tribes of Oklahoma 100 Red Moon Circle Concho, Oklahoma 73022	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Mr. Phil Cross Tribal Historic Preservation Officer Caddo Nation of Oklahoma P.O. Box 487	

## ENVIRONMENTAL ASSESSMENT

**Table 7 - SUMMARY OF COMMENTS**

<b>Table 7 - SUMMARY OF COMMENTS</b>	
Binger, OK 73009	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Principal Chief James Floyd Muscogee (Creek) Nation P.O. Box 580 Okmulgee, Oklahoma 74447	
<b>Comment:</b>	No comment received.
<b>Response:</b>	
Everett Bandy Triqal Historic Preservation Officer Quapaw Nation P.O. Box 765 Quapaw, OK 74363 (w)918-238-3100	
<b>Comment:</b>	The Quapaw Nation has vital interests in protecting its historical and ancestral cultural resources. We do not anticipate that this project will adversely impact any cultural resources or human remains protected under the NHPA, NEPA, or the Native American Graves Protection and Repatriation Act. If, however, artifacts or human remains are discovered during project construction, we ask that work cease immediately and that you contact the Quapaw Nation Historic Preservation Office.
<b>Response:</b>	Comment noted.

## ENVIRONMENTAL ASSESSMENT

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### 6.0 REFERENCES

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- Council on Environmental Quality. 2016. Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews. August 1, 2016.
- Curtis N.M. and W.E. Ham. 1979. Geomorphic Provinces of Oklahoma. In: Geology and Earth Resources of Oklahoma. Education Publication 1. Oklahoma Geological Survey.
- Eagle Environmental Consulting, Inc. 2020. Biological Assessment, Oklahoma Veterans Cemetery, Ardmore, Carter County, Oklahoma.
- Eagle Environmental Consulting, Inc. 2020. Phase 1 Environmental Site Assessment, Oklahoma Veterans Cemetery, Ardmore, Carter County, Oklahoma.
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- Environmental Protection Agency. 2020. National Multi-Pollutant County Maps, Map of Number of NAAQS by County Designated Nonattainment-US Map, Assessed at <https://www3.epa.gov/airquality/greenbook/mapnpoll.html>
- Oklahoma Department of Environmental Quality. 2019. Data Viewer. Assessed at <https://gis.deq.ok.gov/maps/>
- Oklahoma Climatologic Survey. 2020. Carter County, Oklahoma Climate Summary.
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- Oklahoma Department of Environmental Quality. 2014. The 303(d) list of Category 5 impaired waterbodies in Oklahoma. Accessed at [http://www.deq.state.ok.us/WQDNew/305b\\_303d/index.html](http://www.deq.state.ok.us/WQDNew/305b_303d/index.html).
- Oklahoma Geological Survey Website. 2020. Major Geological Provinces of Oklahoma. <http://www.ou.edu/content/ogs/generalinterest.html>
- Oklahoma Water Resources Board Website. 2020. Interactive Maps and GIS Data. <http://www.owrb.ok.gov/maps/index.php>.
- United States Army Corps of Engineers. 1987. Wetland Delineation Manual, Wetlands Research Program Technical Report, Y-87-1
- United States Environmental Protection Agency. 2020. Website. <http://www.epa.gov/region6/water/swp/ssa/maps.htm>
- U.S. Department of Health and Human Resources Website. 2020. Income Ranges Associated with 2019 Poverty Guidelines. Assessed at <https://www.acf.hhs.gov/occ/resource/income-ranges-associated-with-2017-poverty-guidelines>.

## ENVIRONMENTAL ASSESSMENT

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U.S. Environmental Protection Agency Website. 2019. Green Book Map Downloaded. Accessed at <https://www.epa.gov/green-book/green-book-map-download>

United States Federal Emergency Management Administration Website. 2020. FEMA Flood Map Service Center. <http://msc.fema.gov/portal>.

United States Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey for Carter County, Oklahoma. Available online at <http://websoilsurvey.nrcs.usda.gov>.

U.S. National Park Service. 2019. National Wild and Scenic Rivers System List. <https://www.rivers.gov/>.

United States Department of the Interior, U.S. Fish and Wildlife Service. IPAC [http://www.fws.gov/southwest/es/oklahoma/sect7.htm#Species\\_in\\_OK](http://www.fws.gov/southwest/es/oklahoma/sect7.htm#Species_in_OK), received on March 27, 2020.

### 7.0 LIST OF PREPARERS

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#### EAGLE ENVIRONMENTAL CONSULTING, INC.



**Steven Votaw, President.** Steve has 34 years of experience in biological and ecological studies. Mr. Votaw is the President of Eagle Environmental Consulting, Inc. (20+ years) and has been the Project Manager on various environmental impact statements, environmental site assessments, biological resource evaluations, wetland delineations, and threatened and endangered species surveys. Mr. Votaw was previously a Senior Regulatory Project Manager (10 years) with the U.S. Army Corps of Engineers and Fisheries Technician with the Oklahoma Department of Wildlife Conservation (2 years). Mr. Votaw received a Bachelor of Science degree in Fisheries Management and Wildlife Biology from Northeastern Oklahoma State University with post-graduate work in environmental science.

**Jeff London, National Resource and Sr. GIS Analyst.** Jeff has years of experience in the environmental field. Mr. London was previously a Lake and Project Manager for the U.S. Army Corps of Engineers (36 years). Mr. London was responsible for managing the O&M, recreation, and natural resource programs. He also served as an outdoor recreation planner and project manager for District-wide recreation, environmental and interagency support programs. Additionally, he uses Geographic Information System (GIS) and CAD technology to analyze and display environmental features in support of biological and ecological studies and NEPA documentation. Mr. London received a Bachelor of Science degree in forestry from Oklahoma State University with postgraduate work in GIS.

**Sean Votaw, Field Biologist and GIS Specialist.** Sean has 6 years of experience in biological and ecological surveys as well as wetland and waterway delineations and Phase I environmental site assessments. Mr. Votaw received a Bachelor of Science degree in Fish and Wildlife Biology from Northeastern Oklahoma State University.

## ENVIRONMENTAL ASSESSMENT

### SECTION 8.0 APPLICABLE FEDERAL LAWS AND REGULATIONS

<b>APPLICABLE FEDERAL ENVIRONMENTAL LAWS AND REGULATIONS</b>	
Archeological and Historical Preservation Act	1974, 16 U.S.C. 469, <u>et seq</u>
Clean Air Act, as amended	1990, 42 U.S.C. 7609, <u>et seq</u>
Clean Water Act, as amended	1977, U.S.C. 1251, <u>et seq</u>
Endangered Species Act, as amended	1973, 16 U.S.C. 1531, <u>et seq</u>
Federal Water Project Recreation Act, as amended	1965, 16 U.S.C. 460-1-12, <u>et seq</u>
Fish and Wildlife Coordination Act, as amended	1934, 16 U.S.C. 661, <u>et seq</u>
Land and Water Conservation Fund Act, as amended	1965, 16 U.S.C. 661, <u>et seq</u>
National Historic Preservation Act, as amended	1966, 16 U.S.C. 470a, <u>et seq</u>
National Environmental Policy Act, as amended	1969, 42 U.S.C. 4321, <u>et seq</u>
Native American Graves Protection & Repatriation Act	1990, 25 U.S.C. 3001-13, <u>et seq</u>
Rivers and Harbors Act	1899, 33 U.S.C. 401, <u>et seq</u>
Watershed Protection and Flood Prevention Act	1954, 16 U.S.C. 1001, <u>et seq</u>
Floodplain Management	1977, Executive Order 11988
Protection of Wetlands	1977, Executive Order 11990
Environmental Justice	1994, Executive Order 12898
Environmental Health and Safety Risks	1997, Executive Order 13045
Federal Facilities on Historic Properties	1996, Executive Order 13006
Accommodation of Native American Sacred Sites	1996, Executive Order 13007
Farmland Protection Policy Act	1981, 7 U.S.C. 4201, <u>et seq</u>
National Invasive Species Act	1966, 16 U.S.C. 4701, <u>et seq</u>
Invasive Species	1999, Executive Order 13112
Non-indigenous Aquatic Nuisance Species Prevention and Control Act	1990, 16 U.S.C. 4701, <u>et seq</u>
Water Resources Planning Act	1965
Recreational Fisheries	Executive Order 12962
Protection of Migratory Birds	Executive Order 13186

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**APPENDIX A**

**REPRESENTATIVE SITE PHOTOGRAPHS**

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**APPENDIX B**

AGENCY AND TRIBAL COORDINATION

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January 6, 2020

Ms. Jonna Polk, Project Leader  
U.S. Fish and Wildlife Service  
9014 E. 21st Street  
Tulsa, Oklahoma 74129

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Ms. Polk,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

To assist in the early identification of any potential environmental impacts associated with the proposed project, we request comments from federal, state, and local resource agencies with special expertise in environmental issues. Therefore, we are asking for your input regarding available and pertinent data you might have to assist us in this assessment. We would appreciate any information you might have relating to your specific involvement or field of expertise.

To meet our expedited schedule, we would appreciate your comments by February 8, 2020. Replies should be addressed to Steve Votaw Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, Oklahoma 74301 or by e-mail at [steve@eagle-env.com](mailto:steve@eagle-env.com). Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

U.S. Department of Homeland Security  
U.S. Federal Emergency Management Agency, Region IV  
Federal Insurance and Mitigation Administration  
800 North Loop 288  
Denton, Texas 76209

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Sir or Madam,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Carter County Floodplain Administrator  
35 A Street SW  
Ardmore, OK 73401

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Administrator,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Mr. Andrew Commer  
Chief of Regulatory Division  
U.S. Army Corps of Engineers  
1645 S. 101st East Ave  
Tulsa, Oklahoma 74127

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Commer,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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To meet our expedited schedule, we would appreciate your comments by February 8, 2020. Replies should be addressed to Steve Votaw Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, Oklahoma 74301 or by e-mail at [steve@eagle-env.com](mailto:steve@eagle-env.com). Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Mr. Todd D. Fagin  
Oklahoma Biology Survey  
111 E. Chesapeake Street  
Norman, Oklahoma, 73019

**RE: Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Fagin,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Ms. Julie Cunningham, Executive Director  
Oklahoma Water Resources Board  
3800 North Classen Blvd  
Oklahoma City, Oklahoma 73118

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Ms. Cunningham,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Mr. Steve Glasgow, State Resource Conservationist  
U.S. Department of Agriculture  
Natural Resources of Conservation Service  
100 USDA, Suite 206  
Stillwater, Oklahoma 77074

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Glasgow,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Mr. Brooks Tramell, Wetlands Program Coordinator  
Oklahoma Conservation Commission  
2800 N Lincoln Blvd  
Oklahoma City, Oklahoma 73105

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Tramell,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Mr. David P. Brown, Associate Director  
Oklahoma Geological Survey  
Sarkeys Energy Center  
100 E. Boyd St., Suite N131  
Norman, Oklahoma 73019

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Brown,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Director Jason Lewis  
U.S. Geological Survey Oklahoma Water Science Center  
202 NW 66<sup>th</sup> Street  
Oklahoma City, Oklahoma 73116

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Lewis,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Mr. Robert Houston, Regional NEPA Coordinator  
U.S. Environmental Protection Agency  
Office of Communities, Tribes and Environmental Assessment  
U.S. EPA Region 6, 1201 Elm Street, Suite 500, Mail Code: ORACN  
Dallas, TX 75270-2102

**RE: Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Houston,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Mr. J.D. Strong  
Oklahoma Department of Wildlife Conservation  
P.O. Box 53465  
Oklahoma City, Oklahoma 73152

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Strong,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Dr. Kary Stackelbeck, State Archaeologist  
Oklahoma Archeological Survey  
University of Oklahoma  
111 E. Chesapeake Street  
Norman, Oklahoma 73019

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Dr. Stackelbeck,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
President

Attachment



January 6, 2020

Mr. Ian Thompson, Tribal Historic Preservation Officer  
Choctaw Nation of Oklahoma  
P.O. Box 1210  
Durant, Oklahoma 74702

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Thompson,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

The Choctaw Nation has been identified as a Native American Tribe that may have ancestral ties to the project area. Your input and knowledge of traditional religious, cultural issues or areas is highly regarded as part of the environmental study. We ask for your comments regarding available and pertinent data you might have to assist in this assessment.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
Project Manager

Attachment



January 6, 2020

Dr. Andrea Hunter  
Director & Tribal Historic Preservation Officer  
The Osage Nation  
627 Grandview Avenue  
Pawhuska, Oklahoma 74056

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Dr. Hunter,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

The Osage Nation has been identified as a Native American Tribe that may have ancestral ties to the project area. Your input and knowledge of traditional religious, cultural issues or areas is highly regarded as part of the environmental study. We ask for your comments regarding available and pertinent data you might have to assist in this assessment.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
Project Manager

Attachment



January 6, 2020

Ms. Shirley LookingGlass, THPO  
Apache Tribe of Oklahoma  
P.O. Box 1220  
Anadarko, Oklahoma 73005

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Ms. LookingGlass,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

The Apache Tribe of Oklahoma has been identified as a Native American Tribe that may have ancestral ties to the project area. Your input and knowledge of traditional religious, cultural issues or areas is highly regarded as part of the environmental study. We ask for your comments regarding available and pertinent data you might have to assist in this assessment.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
Project Manager

Attachment



---

January 6, 2020

Mr. Gary McAdams  
Tribal Historic Preservation Officer  
Wichita and Affiliated Tribes  
P.O. Box 729  
Anadarko, Oklahoma 73005

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. McAdams,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

The Wichita and Affiliated Tribes has been identified as a Native American Tribe that may have ancestral ties to the project area. Your input and knowledge of traditional religious, cultural issues or areas is highly regarded as part of the environmental study. We ask for your comments regarding available and pertinent data you might have to assist in this assessment.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
Project Manager

Attachment



---

January 6, 2020

Ms. Virginia Richey, Tribal Historic Preservation Officer  
Cheyenne and Arapaho Tribes of Oklahoma  
100 Red Moon Circle  
Concho, Oklahoma 73022

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Ms. Richey,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

The Cheyenne and Arapaho Tribes of Oklahoma has been identified as a Native American Tribe that may have ancestral ties to the project area. Your input and knowledge of traditional religious, cultural issues or areas is highly regarded as part of the environmental study. We ask for your comments regarding available and pertinent data you might have to assist in this assessment.

Replies should be addressed to Steve Votaw Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, Oklahoma 74301 or by e-mail at [steve@eagle-env.com](mailto:steve@eagle-env.com). We would appreciate your comments by February 8, 2020. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
Project Manager

Attachment



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January 6, 2020

Mr. Phil Cross  
Tribal Historic Preservation Officer  
Caddo Nation of Oklahoma  
P.O. Box 487  
Binger, OK 73009

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Cross,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

The Caddo Nation of Oklahoma has been identified as a Native American Tribe that may have ancestral ties to the project area. Your input and knowledge of traditional religious, cultural issues or areas is highly regarded as part of the environmental study. We ask for your comments regarding available and pertinent data you might have to assist in this assessment.

Replies should be addressed to Steve Votaw Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, Oklahoma 74301 or by e-mail at [steve@eagle-env.com](mailto:steve@eagle-env.com). We would appreciate your comments by February 8, 2020. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
Project Manager

Attachment



---

January 6, 2020

Principal Chief James Floyd  
Muscogee (Creek) Nation  
P.O. Box 580  
Okmulgee, Oklahoma 74447

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Chief Floyd,

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

The Muscogee (Creek) Nation has been identified as a Native American Tribe that may have ancestral ties to the project area. Your input and knowledge of traditional religious, cultural issues or areas is highly regarded as part of the environmental study. We ask for your comments regarding available and pertinent data you might have to assist in this assessment.

Replies should be addressed to Steve Votaw Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, Oklahoma 74301 or by e-mail at [steve@eagle-env.com](mailto:steve@eagle-env.com). We would appreciate your comments by February 8, 2020. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
Project Manager

Attachment



January 6, 2020

Mr. Everett Bandy  
Tribal Historic Preservation Officer  
Quapaw Tribe of Indians  
P.O. Box 765  
Oupaw, OK 74363

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Bandy

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

The Quapaw Tribe has been identified as a Native American Tribe that may have ancestral ties to the project area. Your input and knowledge of traditional religious, cultural issues or areas is highly regarded as part of the environmental study. We ask for your comments regarding available and pertinent data you might have to assist in this assessment.

Replies should be addressed to Steve Votaw Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, Oklahoma 74301 or by e-mail at [steve@eagle-env.com](mailto:steve@eagle-env.com). We would appreciate your comments by February 8, 2020. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
Project Manager

Attachment



January 6, 2020

Ms. Karen Brunso  
The Chickasaw Nation  
Tribal Historic Preservation Officer  
2020 Arlington Nation, Suite 4  
Ada, Oklahoma 74820

RE: **Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Bandy

Eagle Environmental Consulting, Inc. (EEC) has been retained by the Oklahoma Department of Veterans Affairs to perform the necessary surveys and data collection efforts leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts relative to the captioned project. The project area is located on approximately 20 acres of mostly undeveloped land near the northwest corner of the intersection of Myall and Commerce Streets in Ardmore, Carter County, OK. The proposed cemetery development project would consist of an entry gate and feature an avenue of flags promenade, an administration building, a maintenance facility/service yard, committal shelter, and flag assembly area. The cemetery will also include various types of interments including; pre-placed crypts, in ground cremains, and columbarium. The entire site will be landscaped appropriate to a cemetery and include various infrastructure and stormwater elements. The purpose of the project is to provide an appropriate place of interment for United States military veterans. The need for the project is to secure a parcel of land in an appropriate location and setting which will accommodate the anticipated current and future need for cemetery facilities for veterans and their families in the State of Oklahoma and vicinity of Ardmore. The cemetery design exhibit is provided on the attached project location exhibit for reference.

The Chickasaw Nation has been identified as a Native American Tribe that may have ancestral ties to the project area. Your input and knowledge of traditional religious, cultural issues or areas is highly regarded as part of the environmental study. We ask for your comments regarding available and pertinent data you might have to assist in this assessment.

Replies should be addressed to Steve Votaw Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, Oklahoma 74301 or by e-mail at [steve@eagle-env.com](mailto:steve@eagle-env.com). We would appreciate your comments by February 8, 2020. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw  
Project Manager

Attachment



## Osage Nation Historic Preservation Office

HAZAZA KOCN KAPPA

**Date:** January 30, 2020

**File:** 1920-2514OK-1

**RE:** VA, Eagle Environmental Consulting, Oklahoma State Veterans Cemetery, Ardmore, Carter County, Oklahoma

Eagle Environmental Consulting  
Steven Votaw  
P.O. Box 335  
Vinita, OK 74301

Dear Mr. Votaw,

The Osage Nation Historic Preservation Office has received notification and accompanying information for the proposed project listed as VA, Eagle Environmental Consulting, Oklahoma State Veterans Cemetery, Ardmore, Carter County, Oklahoma. **The Osage Nation requests that a cultural resources survey be conducted for this project.**

In accordance with the National Historic Preservation Act, (NHPA) [54 U.S.C. § 300101 et seq.] 1966, undertakings subject to the review process are referred to in 54 U.S.C. § 302706 (a), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

The Osage Nation has a vital interest in protecting its historic and ancestral cultural resources. **The Osage Nation anticipates reviewing and commenting on the planned Phase I cultural resources survey report for the proposed VA, Eagle Environmental Consulting, Oklahoma State Veterans Cemetery, Ardmore, Carter County, Oklahoma.**

Should you have any questions or need any additional information please feel free to contact me at the number listed below. Thank you for consulting with the Osage Nation on this matter.

Jackie Rodgers  
Archaeologist



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March 25, 2020

Dr. Andrea Hunter  
Tribal Historic Preservation Office  
Osage Nation  
627 Grandview  
Pawhuska, OK 74056

Subject: State Veterans Cemetery, Ardmore, Carter County, OK

Dr. Hunter:

Please reference your office's scoping response letter dated January 30, 2020 relative to the subject proposed action whereby the Osage Nation requested a cultural resource survey be conducted within the proposed project area. Please find the attached cultural resources study conducted at the proposed Oklahoma Department of Veterans Affairs (ODVA) State Veterans Cemetery project area in Ardmore, OK for your reference. The U.S. Veterans Administration has delegated authority to the ODVA to conduct Section 106 of the National Historic Preservation Act (Section 106) coordination with the State Historic Preservation Office. Please accept this letter and report of survey on behalf of ODVA as part of our effort to comply with Section 106 and let me know if you have any questions or comments. Thank you.

Sincerely,

Steven R. Votaw  
President

cc:  
OHS  
OAS

**From:** [steve.votaw65](mailto:steve.votaw65)  
**To:** [steve@eagle-env.com](mailto:steve@eagle-env.com)  
**Subject:** FW: 1920-2514OK-1 Ardmore Veteran"s Cemetery  
**Date:** Friday, April 24, 2020 10:33:16 AM

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----- Original message -----

**From:** Jacqueline Rodgers <jrodgers@osagenation-nsn.gov>  
**Date:** 4/23/20 10:55 AM (GMT-06:00)  
**To:** "steve.votaw65" <steve.votaw65@gmail.com>  
**Subject:** 1920-2514OK-1 Ardmore Veteran's Cemetery

Dear Mr. Votaw,

The Osage Nation Historic Preservation Office has received your submission for the VA, Eagle Environmental Consulting, Oklahoma State Veterans Cemetery, Ardmore, Carter County, Oklahoma and determined that the proposed project most likely will not adversely affect any sacred properties and/or properties of cultural significance to the Osage Nation. For direct effect, the finding of this NHPA Section 106 review is a determination of "No Properties" eligible or potentially eligible for the National Register of Historic Places.

In accordance with the National Historic Preservation Act, (NHPA) [16 U.S.C. 470 §§ 470-470w-6] 1966, undertakings subject to the review process are referred to in S101 (d) (6) (A), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

The Osage Nation has a vital interest in protecting its historic and ancestral cultural resources, which are protected under the NHPA, NEPA, the Native American Graves Protection and Repatriation Act, and Osage law within the surveyed portion of the project.

Should you have any questions or need any additional information please feel free to contact me at the number and/or email address listed below. Thank you for consulting with the Osage Nation on this matter.

Jackie Rodgers  
Archaeologist, MA, RPA  
627 Grandview Avenue, Pawhuska, OK 74056



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
2488 EAST 81<sup>ST</sup> STREET  
TULSA, OKLAHOMA 74137-4290

February 19, 2020

Regulatory Office

Mr. Steve Votaw  
Eagle Environmental  
PO Box 335  
Vinita, Oklahoma 74301

Dear Mr. Votaw:

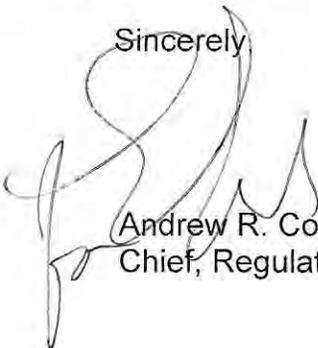
Please reference your January 6, 2020, correspondence regarding a request for comments on the construction of a cemetery, including pre-placed crypts, in ground cremains, and columbarium. The proposed project is located at Latitude: 34.159008, Longitude: -97.147521, Carter County, Oklahoma. We have reviewed the submitted data to determine whether a Department of the Army (DA) permit would be required pursuant to Section 404 of the Clean Water Act.

A preliminary review indicates possible jurisdictional waters or wetlands may be present on described lands within the proposal. A DA permit may be required if any future project requires placement of dredge or fill material into these areas.

We ask that you re-submit your request once more detailed site specific information, including construction plans, are completed. Please address any planned impacts to possible jurisdictional areas which may be present on the described lands.

Your request has been assigned Identification Number SWT-2020-00069. Please reference this number during any future correspondence. If you have any questions please contact Ms. Eva Zaki-Dellitt at 918-669-7009.

Sincerely,



Andrew R. Commer  
Chief, Regulatory Office



## Oklahoma Archeological Survey

THE UNIVERSITY OF OKLAHOMA

January 14, 2020

Eagle Environmental Consulting, Inc.  
Attn: Steven R. Votaw  
President  
P.O. Box 335  
Vinita, Oklahoma 74301

Re: OAS FY20-0159 UDVA Project #FAI: OK-16-04 Ardmore Cemetery, Oklahoma Veterans Centers at Ardmore, OK.  
Legal Description: SE ¼ SW ¼ SE ¼ Section 36, T4S, R1E, Carter County, Oklahoma.

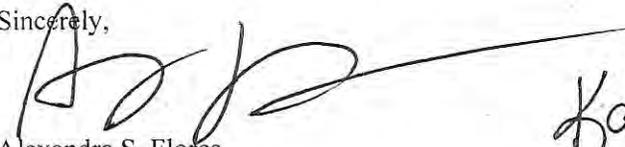
Dear Mr. Votaw:

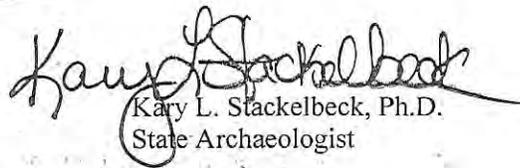
The Community Assistance Program staff of the Oklahoma Archeological Survey has reviewed the above referenced project in order to identify areas that may potentially contain prehistoric or historic archeological materials (historic properties). The location of your project has been crosschecked with the state site files containing approximately 26,000 archaeological sites, which are currently recorded for the state of Oklahoma. No sites are listed as occurring within your project area, and based on the topographic and hydrologic setting, no archaeological materials are likely to be encountered. Thus, an archaeological field inspection is not considered necessary. Please contact this office at (405) 325-7211 if buried archaeological materials such as chipped stone tools, pottery, bone, historic crockery, glass, metal items or building materials are exposed during construction activities.

This environmental review and evaluation is done in cooperation with the State Historic Preservation Office, Oklahoma Historical Society. The responsible federal agency or their official delegate must also have a letter from that office to document consultation pursuant to Section 106 of the National Historic Preservation Act.

In addition to our review comments, under 36CFR Part 800.3 you are reminded of your responsibility to consult with the appropriate Native American tribe/groups to identify any concerns they may have pertaining to this undertaking and potential impacts to properties of traditional and/or ceremonial value.

Sincerely,

  
Alexandra S. Flores  
Staff Archaeologist

  
Kary L. Stackelbeck, Ph.D.  
State Archaeologist

: ksw  
cc: SHPO





---

March 25, 2020

Melvena Heisch  
Deputy State Historic Preservation Officer  
State Historic Preservation Office, Oklahoma Historical Society  
Oklahoma History Center  
800 Nazih Zuhdi Drive  
Oklahoma City, OK 73105

Subject: State Veterans Cemetery, Ardmore, Carter County, OK

Ms. Heisch:

Please reference our scoping letter relative to the subject proposed action submitted to your office by letter dated January 6, 2020. The Oklahoma Archeological Survey responded to our letter stating no field investigations would be required. However, the Osage Nation requested a cultural resource survey be conducted within the proposed project area.

Please find the attached cultural resources study conducted at the proposed Oklahoma Department of Veterans Affairs (ODVA) State Veterans Cemetery project area in Ardmore, OK for your reference. The U.S. Veterans Administration has delegated authority to the ODVA to conduct Section 106 of the National Historic Preservation Act (Section 106) coordination with the State Historic Preservation Office. Please accept this letter and report of survey as part of our effort to comply with Section 106 and let me know if you have any questions or comments. Thank you.

Sincerely,

Steven R. Votaw  
President

cc:  
OAS  
Osage Nation THPO



*Oklahoma Archeological Survey*

THE UNIVERSITY OF OKLAHOMA

April 6, 2020

Eagle Environmental Consulting  
Attn: Steven R. Votaw, President  
P.O. Box 335  
Vinita, OK 74301

Re: OAS FY20-1834 (FY20-0159) *Archaeological Investigation Report for the Construction of New State Veterans Cemetery, Ardmore*. Report by James R. Holt.  
Legal Description: S ½ SE ¼ Section 36 T4S, R1E, Carter County, Oklahoma.

Dear Mr. Votaw,

This agency received the submitted cultural resources survey report of investigations regarding the above-referenced undertaking for review and comment. From the information provided, we understand that Holt Consulting Services, LLC staff surveyed the 19.3-acre Area of Potential Effect (APE) on February 20, 2020. No archaeological sites were documented. As such, Holt Consulting Services, LLC recommends the project as proposed will have *No Effect on Historic Properties*.

**We concur with the findings and recommendations as they pertain to prehistoric archaeological resources and defer opinion on overall project effects to the Historic Archaeologist with the State Historic Preservation Office.**

This review has been conducted in cooperation with the State Historic Preservation Office, Oklahoma Historical Society. You must also have a letter from that office to document your consultation pursuant to Section 106 of the National Historic Preservation Act.

Sincerely,

*Kary L. Stackelbeck*

Kary L. Stackelbeck, Ph.D.  
State Archaeologist

cc: SHPO



---

March 25, 2020

Dr. Kary Stackelbeck  
State Archeologist  
OK Archeological Survey  
11 Chesapeake, Room 102  
Norman, Oklahoma 73019-5111

Subject: State Veterans Cemetery, Ardmore, Carter County, OK

Dr. Stackelbeck:

Please reference your scoping response letter dated January 14, 2020 relative to the subject proposed action. While your letter advised no field survey investigations would be required, the Osage Nation requested a cultural resource survey be conducted within the proposed project area.

Please find the attached cultural resources study conducted at the proposed Oklahoma Department of Veterans Affairs (ODVA) State Veterans Cemetery project area in Ardmore, OK for your reference. The U.S. Veterans Administration has delegated authority to the ODVA to conduct Section 106 of the National Historic Preservation Act (Section 106) coordination with the State Historic Preservation Office. Please accept this letter and report of survey as part of our effort to comply with Section 106 and let me know if you have any questions or comments. Thank you.

Sincerely,

Steven R. Votaw  
President

cc:  
OHS  
Osage Nation THPO



## Oklahoma Historical Society

Founded May 27, 1893

### State Historic Preservation Office

Oklahoma History Center • 800 Nazih Zuhdi Drive • Oklahoma City, OK 73105-7917  
(405) 521-6249 • Fax (405) 522-0816 • [www.okhistory.org/shpo/shpom.htm](http://www.okhistory.org/shpo/shpom.htm)

April 20, 2020

Ms. Dorita L. Herd, Construction Program Administrator  
State of Oklahoma Department of Veterans Affairs  
2132 N.E. 36<sup>th</sup> Street  
Oklahoma City, OK 73111

RE: File #0189-20; DVA Proposed Ardmore Cemetery at Ardmore Veterans Center, #FAI: OK-16-04

Dear Ms. Herd:

On March 31, 2020, we received for review additional documentation for the project that we had previously consulted with you in November 2019, regarding an archaeological survey report prepared by Holt Consulting Services, Inc., for the proposed Ardmore Veterans Center Cemetery in Carter County, submitted by Mr. Steven Votaw, President of Eagle Environmental Consulting, with his letter dated March 25, 2020. As you aware, the U.S. Department of Veterans Affairs (DVA) has delegated authority to the State of Oklahoma Department of Veterans Affairs (OK DVA) to consult with our office under Section 106 of the National Historic Preservation Act (NHPA). However, this delegation of authority, does not include the consultant to your agency. The reason for this restriction, is that it is extremely important that our formal communication on any federal undertaking be with the responsible entity as only that entity can conclude the Section 106 process when a federally assisted project does affect historic properties (properties listed on or eligible for the National Register of Historic Places). Therefore, that is why we are responding to the OK DVA, the agency that has been delegated authority by the VA to consult with our office under Section 106 of the NHPA.

Upon examination of the information contained in the Oklahoma Landmarks Inventory (OLI) files and other materials on historic resources available in our office, we find that there are no historic properties affected by the referenced project.

Thank you for the opportunity to comment on this project. We look forward to working with you in the future. Please remember that per regulation, the 30-day review period starts on the day we receive documents in our office, not the date they were mailed. If you have any questions, please contact Catharine M. Wood, Historical Archaeologist, at 405/521-6381.

Should further correspondence pertaining to this project be necessary, please reference the above underlined file number. Thank you.

Sincerely,

Lynda Ozan  
Deputy State Historic  
Preservation Officer

LO:pm

✓ cc: Mr. Steven R. Votaw, President, Eagle Environmental Consulting



January 15, 2020

Steven Votaw  
Eagle Environmental Consulting, Inc.  
P.O. Box 335  
Vinita, Oklahoma 74301

Re: Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK

---

Dear Mr. Votaw:

Per your request, we have reviewed the subject project information and determined that the proposed project will not impact any easements, watersheds or prime farmland soils as defined by the Farmland Protection Policy Act.

If I can be of further assistance, let me know.

Sincerely,

A handwritten signature in black ink that reads "Steve Glasgow". The signature is written in a cursive, flowing style.

Steve Glasgow  
STATE RESOURCE CONSERVATIONIST



**FEMA**

FEDERAL EMERGENCY MANAGEMENT AGENCY  
REGION 6  
MITIGATION DIVISION

**RE: Oklahoma State Veteran Ceremony, Ardmore, Carter County, OK**

**NOTICE REVIEW/ENVIRONMENTAL CONSULTATION**

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We have no comments to offer.  We offer the following comments:

**WE WOULD REQUEST THAT THE COMMUNITY FLOODPLAIN ADMINISTRATOR BE CONTACTED FOR THE REVIEW AND POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT. IF FEDERALLY FUNDED, WE WOULD REQUEST PROJECT TO BE IN COMPLIANCE WITH EO11988 & EO 11990.**

City of Ardmore:

Jessica Scott  
Code Enforcement Officer/FPA  
P.O. Box 249  
Ardmore, OK 73402  
(580) 223-3477

Carter County:

Paul Tucker  
Emergency Management  
P.O. Box 1544  
Ardmore, OK 73401  
(580)223-7937

---

REVIEWER:

*Colleen Sciano*  
Floodplain Management and Insurance Branch  
Mitigation Division  
(940) 383-7257

DATE: January 22, 2020

# QUAPAW NATION

P.O. Box 765  
Quapaw, OK 74363-0765

(918) 542-1853  
FAX (918) 542-4694

January 16, 2020

Eagle Environmental Consulting  
P.O. Box 335  
Vinita, Oklahoma 74301

Re: Oklahoma State Veterans Cemetery, Ardmore, Carter County, Oklahoma

To whom it may concern,

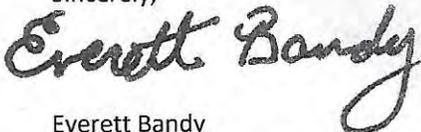
The Quapaw Nation Historic Preservation Office has received and reviewed the information you have provided for the proposed Oklahoma State Veterans Cemetery, Ardmore, Carter County, Oklahoma. Our office finds that this project is not likely to adversely affect the properties of cultural or sacred significance to the Quapaw Nation.

In accordance with the National Historic Preservation Act, (NHPA) [16 U.S.C. 470 §§ 470-470w-6] 1966, undertakings subject to the review process are referred to in S101 (d) (6) (A), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

The Quapaw Nation has vital interests in protecting its historical and ancestral cultural resources. We do not anticipate that this project will adversely impact any cultural resources or human remains protected under the NHPA, NEPA, or the Native American Graves Protection and Repatriation Act. If, however, artifacts or human remains are discovered during project construction, we ask that work cease immediately and that you contact the Quapaw Nation Historic Preservation Office.

Should you have any questions or need any additional information, please feel free to contact me at the number listed below. Thank you for consulting with the Quapaw Nation on this matter.

Sincerely,



Everett Bandy  
Tribal Historic Preservation Officer  
Quapaw Nation  
P.O. Box 765  
Quapaw, OK 74363  
(w) 918-238-3100

J. KEVIN STITT  
GOVERNOR

MATT PINNELL  
LIEUTENANT GOVERNOR



Our Land • Our Heritage • Our Future

TREY LAM  
EXECUTIVE DIRECTOR

LISA KNAUF OWEN  
ASSISTANT DIRECTOR

January 23, 2020

Steve Votaw  
Eagle Environmental Consulting, Inc.  
P.O. Box 335  
Vinita, Ok 74301

**RE: Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK**

Dear Mr. Votaw.:

Your request for a wetland determination for the referenced project, as described in your letter of January 6, 2020 has been reviewed using the Soil Survey of Carter County and the U.S. Fish and Wildlife Service National Wetland Inventory. Neither hydric soils nor wetlands are indicated on the map of the area, indicating that these areas most likely do not contain wetland ecosystems and that your project should not significantly impact wetland resources in the area. If you believe this determination to be inaccurate, an on-site investigation may be needed. This investigation needs to be coordinated with the U.S. Army Corps of Engineers, Regulatory Branch, in Tulsa. Their address and phone number is:

U.S. Army Corps of Engineers  
Mr. Andy Commer  
Chief of Regulatory Branch  
2488 E 81<sup>st</sup> Street  
Tulsa, OK 74137  
918/669-7400

Based on our wetlands determination criteria there should be no significant impact on wetland resources in the area described. If you have any further questions or concerns, please contact me at 405/534-6997.

Sincerely,

A handwritten signature in blue ink that reads "Brooks Tramell".

Brooks Tramell  
Wetlands Program Coordinator  
Water Quality Division

cc: Wetlands file

**From:** Jon Roberts <Jon.Roberts@deq.ok.gov> on behalf of DEQ EnvReviews <EnvReviews@deq.ok.gov>  
**Sent:** Thursday, January 16, 2020 12:26 PM  
**To:** steve@eagle-env.com  
**Subject:** Environmental Impact Review

Dear Mr. Votaw:

In response to your request, we have completed a general environmental review for the project listed below.

**Project**

Letter dated January 6, 2020 – Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK [34.159, -97.147]

**Comment**

While no adverse environmental impacts under DEQ jurisdiction are anticipated, please be aware that prior to beginning any construction activity disturbing more than one acre, you must submit an NOI and obtain authorization under OKR10, construction stormwater. If you need assistance, please contact DEQ's Stormwater Unit at (405) 702-6100.

Additional recommendations to consider may be found at <https://go.usa.gov/xVxyY>.

Future requests may be submitted electronically to [EnvReviews@deq.ok.gov](mailto:EnvReviews@deq.ok.gov) by attaching a single pdf file containing your request and any attachments.

Thank you for the opportunity to provide our comments. If you have any questions or need clarification, please contact me.

Regards,

---

*Jon A. Roberts*, Senior Manager  
Office of External Affairs  
Oklahoma Department of Environmental Quality  
P. O. Box 1677  
707 N. Robinson Ave.  
Oklahoma City, OK 73101-1677  
Ph: (405) 702-7111





## Oklahoma Historical Society

Founded May 27, 1893

### State Historic Preservation Office

Oklahoma History Center • 800 Nazih Zuhdi Drive • Oklahoma City, OK 73105-7917  
(405) 521-6249 • Fax (405) 522-0816 • [www.okhistory.org/shpo/shpom.htm](http://www.okhistory.org/shpo/shpom.htm)

April 20, 2020

Ms. Dorita L. Herd, Construction Program Administrator  
State of Oklahoma Department of Veterans Affairs  
2132 N.E. 36<sup>th</sup> Street  
Oklahoma City, OK 73111

RE: File #0189-20; DVA Proposed Ardmore Cemetery at Ardmore Veterans Center, #FAI: OK-16-04

Dear Ms. Herd:

On March 31, 2020, we received for review additional documentation for the project that we had previously consulted with you in November 2019, regarding an archaeological survey report prepared by Holt Consulting Services, Inc., for the proposed Ardmore Veterans Center Cemetery in Carter County, submitted by Mr. Steven Votaw, President of Eagle Environmental Consulting, with his letter dated March 25, 2020. As you aware, the U.S. Department of Veterans Affairs (DVA) has delegated authority to the State of Oklahoma Department of Veterans Affairs (OK DVA) to consult with our office under Section 106 of the National Historic Preservation Act (NHPA). However, this delegation of authority, does not include the consultant to your agency. The reason for this restriction, is that it is extremely important that our formal communication on any federal undertaking be with the responsible entity as only that entity can conclude the Section 106 process when a federally assisted project does affect historic properties (properties listed on or eligible for the National Register of Historic Places). Therefore, that is why we are responding to the OK DVA, the agency that has been delegated authority by the VA to consult with our office under Section 106 of the NHPA.

Upon examination of the information contained in the Oklahoma Landmarks Inventory (OLI) files and other materials on historic resources available in our office, we find that there are no historic properties affected by the referenced project.

Thank you for the opportunity to comment on this project. We look forward to working with you in the future. Please remember that per regulation, the 30-day review period starts on the day we receive documents in our office, not the date they were mailed. If you have any questions, please contact Catharine M. Wood, Historical Archaeologist, at 405/521-6381.

Should further correspondence pertaining to this project be necessary, please reference the above underlined file number. Thank you.

Sincerely,

Lynda Ozan  
Deputy State Historic  
Preservation Officer

LO:pm

✓ cc: Mr. Steven R. Votaw, President, Eagle Environmental Consulting

OBS Ref. 2020-040-BUS-EAG

Dear Mr. Votaw,

Jan. 10, 2020

We have reviewed occurrence information on federal and state threatened, endangered or candidate species, as well as non-regulatory rare species and ecological systems of importance currently in the Oklahoma Natural Heritage Inventory database for the following location you provided:

Sec. 36-T4S-R1E, Carter County

We found no occurrences of relevant species within the vicinity of the project location as described. However, absence from our database does not preclude such species from occurring in the area.

If you have any questions about this response, please send me an email, or call us at the number given below.

Although not specific to your project, you may find the following links helpful.

ONHI guide to ranking codes for endangered and threatened species:  
[http://vmpinzel.ou.edu/heritage/ranking\\_guide.html](http://vmpinzel.ou.edu/heritage/ranking_guide.html)

Information regarding the Oklahoma Natural Areas Registry:  
[http://www.oknaturalheritage.ou.edu/registry\\_faq.htm](http://www.oknaturalheritage.ou.edu/registry_faq.htm)

Todd Fagin  
Oklahoma Natural Heritage Inventory  
(405) 325-4700  
tfagin@ou.edu

**steve@eagle-env.com**

---

**From:** Aaron Milligan <Aaron.Milligan@owrb.ok.gov>  
**Sent:** Tuesday, February 18, 2020 10:49 AM  
**To:** steve@eagle-env.com  
**Subject:** Veterans Cemetary, Ardmore, OK

Steve,

In response to your letter for comments; I'm sure you are aware of the floodplain at the west of this property. If any work will be done in the floodplain you must contact the City of Ardmore Floodplain Administrator, Jessica Scott.

Thank you,

---

**Aaron Milligan, CFM, RPES**  
Floodplain Management  
Planning & Management Division  
**OKLAHOMA WATER RESOURCES BOARD**  
3800 N Classen Blvd, Oklahoma City, OK 73118  
405.530.8800 • [www.owrb.ok.gov](http://www.owrb.ok.gov) • [@OKWaterBoard](https://twitter.com/OKWaterBoard)



**steve@eagle-env.com**

---

**From:** Madison D. Currie <mcurrie@choctawnation.com>  
**Sent:** Thursday, February 6, 2020 9:37 AM  
**To:** steve@eagle-env.com  
**Cc:** Lindsey Bilyeu  
**Subject:** Oklahoma State Veterans Cemetery, Ardmore, Carter County, OK

Halito Steve Votaw,

The Choctaw Nation of Oklahoma thanks you for the correspondence regarding the above referenced project. Carter County, Oklahoma lies outside our area of historic interest. The Choctaw Nation Historic Preservation Department respectfully defers to the other Tribes that have been contacted.

If you have any questions, please contact me.

Yakoke,

Maddie Danielle Currie  
Compliance Review Officer  
Historic Preservation Department  
Choctaw Nation of Oklahoma  
P.O. Box 1210  
Durant, OK 74702  
580-924-8280 ext. 2727



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**APPENDIX C**

**WATERS OF THE US DELINEATION**

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**WATERS OF THE US DELINEATION**

**Oklahoma State Veterans Cemetery  
Ardmore, Carter County, Oklahoma**

*Prepared for:*



**Oklahoma Department of Veterans Affairs**

**2131 NE 36<sup>th</sup> Street**

**Oklahoma City, OK 73111-3105**

*Prepared by:*



**P.O. Box 335  
Vinita, Oklahoma 74301  
918-272-7656**

**9 North 9<sup>th</sup> Street  
Ft. Smith, Arkansas 72901  
918-244-9595**

**March 2020**



**Steven R. Votaw  
President**

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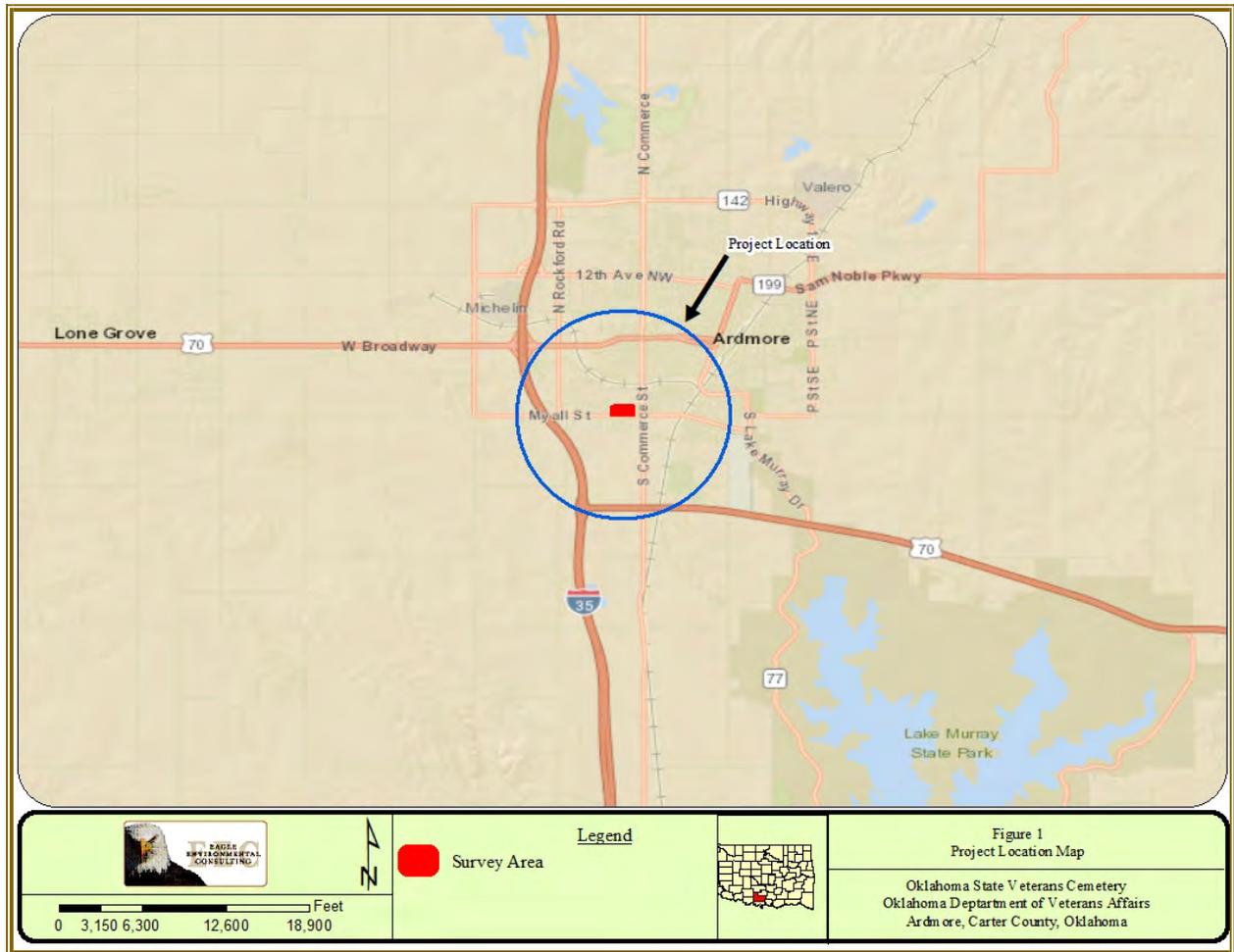
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## 1.0 Introduction

Eagle Environmental Consulting, Inc. (EEC) conducted a Waters' of the United States and wetland delineation survey associated with the proposed Veterans Cemetery development project to identify and demarcate potentially jurisdictional waterways and/or wetlands within the project area. The project area is located northwest of the intersection of Myall and Commerce Streets in Section 36, Township 4 South, Range 1 East, Ardmore, Carter County, Oklahoma. The field survey was performed to collect and record physical characteristics of aquatic areas potentially considered jurisdictional by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. Each aquatic resource was identified and/or investigated according to the diagnostic field indicators used to confirm presence and determine the preliminary jurisdictional status. The project area location map is provided at **Figure 1**.



## 2.0 General Survey Area Description

The surveyed area is located in the Southern Cross Timbers ecoregion (40b) of Oklahoma (Woods et al., 2005). This ecoregion consists of an irregular to undulating plain that is underlain by interbedded westward-dipping sandstone, shale, and limestone. Natural vegetation is a mixture of tall grass prairie and oak – hickory - elm forest. Land use and land cover in this ecoregion consists mostly of rangeland, grassland, cropland and woodland in rugged areas. The main crops are wheat, grain sorghum and alfalfa hay.

### 3.0 Wetland and Waterway Delineation Methodology

The USACE Wetlands Delineation Manual (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region* (USACE 2010) were referenced in concert to identify wetlands. Wetland areas, if observed, would be identified using the routine on-site (level 2) method, as described in Section D of the 1987 USACE Wetlands Delineation Manual. The identification of wetlands consists of a three-parameter approach that involves determining the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Where differences in the two documents occur, the Regional Supplement takes precedence over the 1987 Corps Manual.

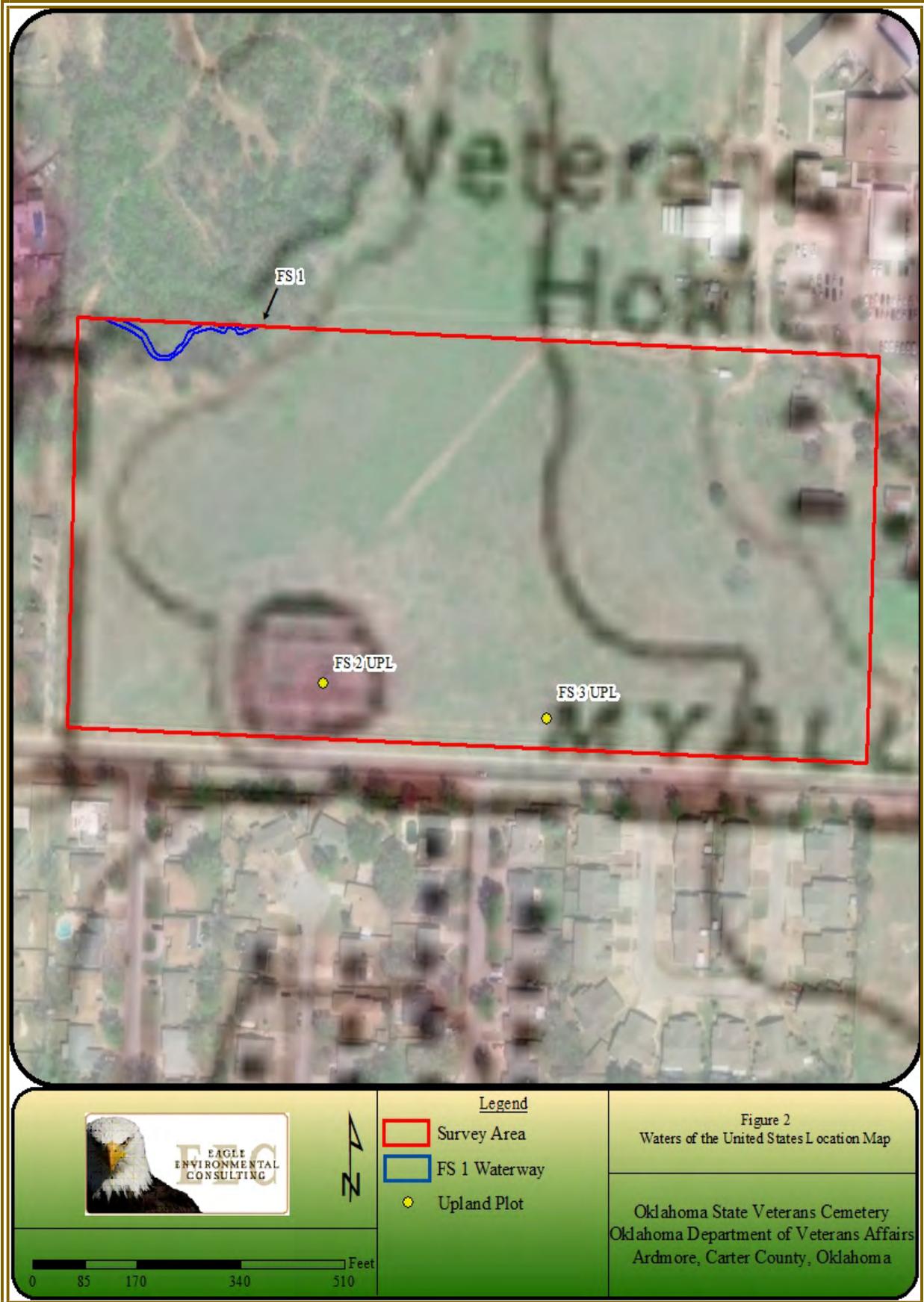
Hydrophytic plant communities are determined after species identification based on the wetland status indicators of the dominant plant species present within the sample plot. In accordance with the USACE delineation manual, plant species that have a wetland indicator status of facultative (FAC), facultative wetland (FACW), or obligate (OBL) represent hydrophytic vegetation. Wetland hydrology implies a hydrologic regime involving periodic inundation or saturation within the upper portions of the soil profile (for sufficient duration) during the growing season. Onsite indicators used as evidence of wetland hydrology include inundation, saturation, sediment deposition, drift lines, water marks, and scouring. Hydric soils are determined based on criteria established by the Soil Conservation Service (USDA, 2000) and described in the regional supplement. Indicators of hydric soils predominantly include soil color and redoximorphic (redox) concentrations (reddish mottles). Soil matrix and mottle color, when appropriate, are identified according to Munsell Soil Color Charts (Kollormorgen, 2000). In most circumstances, all three parameters must be present for the area to be a wetland. Data sampling points are established in representative areas within the wetland areas and in the adjacent uplands. Vegetation, soils, and hydrology characteristics are recorded on data forms for each sampling point and boundaries are established based on the results of the individual sample plots, after further refining as necessary.

Potentially jurisdictional waters of the United States, other than wetlands, were also to be defined if observed. These areas include creek channels, rivers, ponds, and/or lakes. These characteristics include, but are not limited to, a line impressed on a bank, defined bed and bank, shelving, ordinary high water mark, changes in soil characteristics, destruction of terrestrial vegetation, and presence of debris (33 CFR Part 328). Waterways are identified and located according to size, flow patterns, watershed characteristics, presence of an ordinary high water mark, and drainage basin.

### 4.0 Survey Findings

#### Waters of the United States

The onsite survey was conducted to identify and locate those areas exhibiting the required wetland parameters and onsite characteristics for waters of the United States, if observed. Data were collected for each investigated area to characterize and describe the observed indicators. The descriptions for the identified area(s) are provided below according to Field Site (FS) number. One waterway was identified during the field survey and two (2) prospective wetlands were investigated within the survey area. Neither potential wetland area exhibited the required wetland parameters. Photographs of the investigated areas are provided at **Appendix A**. The waters of the US location map is provided in **Figure 2**.



**Field Site Descriptions**

**FS-1** is an intermittent waterway that flows among a moderately well-developed riparian zone dominated by American elm, sugarberry, and eastern red cedar. The channel within the survey area was 278 feet long, 5 to 15 feet wide, and was generally 3 to 4 feet deep with an approximate 2-foot ordinary high-water mark. The channel substrate was alluvial. FS-1 will be considered jurisdictional by the USACE but will not be affected by the proposed project.

**FS-2** was investigated as potential wetland. The sample site was situated within the area of a former pond identified on the USGS topographic map. Field analysis concluded that the pond had been previously filled prior to this survey. The area was inundated and saturated at the time of survey however the observed hydrology indicators were associated with a shallow drainage ditch covered with herbaceous vegetation with no ordinary high-water mark. The dominant vegetation consisted of Bermuda grass and brome. Hydric soils (likely evident of the historic pond feature) were identified based on the presence of redoximorphic features within the low chroma soil pedon. The area did not meet the hydrophytic vegetation parameter and was not confirmed as wetland.

**FS-3** was also investigated as a potential wetland. The area exhibited inundation and saturation. Hydric soils were confirmed based on redox features within the low chroma matrix. The dominant vegetation consisted of Bermuda grass and brome. FS-3 did not meet the required wetland parameters and was confirmed as upland.

**5.0 Conclusion**

The subject wetland and waterway delineation was performed to identify the presence of jurisdictional waterways and/or wetlands within the proposed project area. One intermittent waterway was identified, recorded, and delineated during the field survey. No wetland areas were confirmed or delineated. The following table provides a summary of the feature type, linear footage, acreage and the centroid location coordinates for each aquatic feature:

<b>Identified Aquatic Features</b>					
<b>Site Number</b>	<b>Feature Type</b>	<b>Footage</b>	<b>Acres</b>	<b>Latitude</b>	<b>Longitude</b>
FS-1	Ephemeral Stream	278	0.01	34.16008	-97.1492
<b>Total</b>		<b>278</b>	<b>0.01</b>		

## 6.0 References

Oklahoma Color Digital Ortho-Quadrangle Maps. 2020.

Title 33. Code of Federal Regulations. Part 328. *Definitions of Waters of the United States*.

U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, Environmental Laboratory, Vicksburg, MS.

U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region*.

U.S. Department of Agriculture. 2012. Field Indicators of Hydric Soils of the United States. Soil Conservation Service.

United States Department of Agriculture, Soil Conservation Service. 1981. Land Resource Regions and Major Land Resource Areas of the United States. Agriculture Handbook 296.

United States Geological Survey. 7.5-minute topographic map.

Woods, A.J., Omernik, J.M., Butler, D.R., Ford, J.G., Henley, J.E., Hoagland, B.W., Arndt, D.S., and Moran, B.C., 2005, Ecoregions of Oklahoma (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,250,000).

## Appendix A

### **Representative Site Photographs**

FS-1



FS-2 Sample Point



FS-3 Sample Point



## Appendix B

### **Wetland Data Forms**

## WETLAND DETERMINATION DATA SHEET – Great Plains Region

Project/Site: Oklahoma State Veterans Cemetery City/County: Ardmore/ Carter Sampling Date: 2/18/20  
 Applicant/Owner: Oklahoma Veterans Association State: Ok Sampling Point: FS-2 UPL  
 Investigator(s): SRV & STV Section, Township, Range: S36, T4S, R1E  
 Landform (hillside, terrace, etc.): oxbow Local relief (concave, convex, none): concave Slope (%): 3-5  
 Subregion (LRR):                      Lat: 34.159 Long: -97.148 Datum: NAD 83  
 Soil Map Unit Name: Normangee loam, 3 to 5 % slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Above average rainfall in area prior to field survey	

### VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
=Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>30</u> x 5 = <u>150</u> Column Totals: <u>90</u> (A) <u>360</u> (B) Prevalence Index = B/A = <u>4.00</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
=Total Cover				
<u>Herb Stratum</u> (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Cynodon dactylon</u>	50	Yes	FACU	
2. <u>Bromus tectorum</u>	30	Yes	UPL	
3. <u>Eleocharis fallax</u>	10	No	OBL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
90 =Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
=Total Cover				
% Bare Ground in Herb Stratum _____				

Remarks:

**SOIL**

Sampling Point: FS-2 UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	90	2.5YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) (LRR G)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<b>(LRR H outside of MLRA 72 &amp; 73)</b>
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<b>(MLRA 72 &amp; 73 of LRR H)</b>	

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

**Remarks:**

This data sheet is revised from Great Plains Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 8.0, 2016.  
The soil appears to have been mixed with fine pebbled soil when the pond was filled.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<b>(where tilled)</b>
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<b>(where not tilled)</b>	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): 1  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): 0  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

Saturation could be present due to the extensive rainfall before the day of the survey.



**SOIL**

Sampling Point: FS 3 UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	90	2.5YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) (LRR G)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<b>(LRR H outside of MLRA 72 &amp; 73)</b>
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<b>(MLRA 72 &amp; 73 of LRR H)</b>	

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

**Remarks:**

This data sheet is revised from Great Plains Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 8.0, 2016.  
 The soil appears to have been mixed with fine pebbled soil when the pond was filled.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): 1  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): 0  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

Saturation could be present due to the extensive rainfall before the day of the survey.

---

**APPENDIX D**

**BIOLOGICAL ASSESSMENT**

---

**Biological Assessment**

**Oklahoma State Veterans Cemetery  
Ardmore, Carter County, Oklahoma**

*Prepared for:*



**Oklahoma Department of Veterans Affairs**

**2131 NE 36<sup>th</sup> Street**

**Oklahoma City, OK 73111-3105**

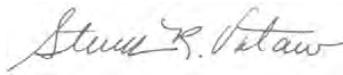
*Prepared by:*



**P.O. Box 335  
Vinita, Oklahoma 74301  
918-272-7656**

**9 North 9<sup>th</sup> Street  
Ft. Smith, Arkansas 72901  
918-244-9595**

**March 2020**



**Steven R. Votaw  
President**

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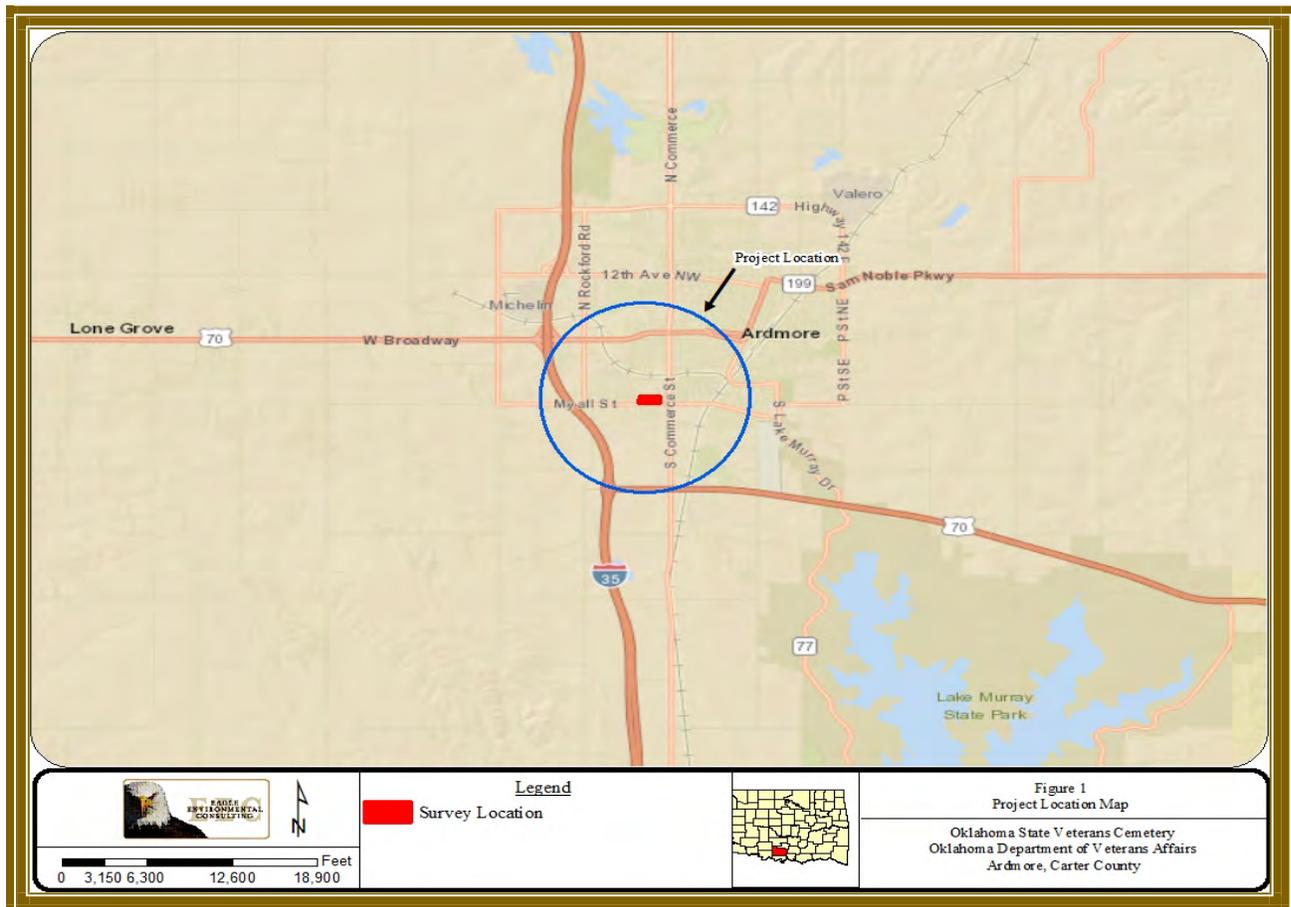
## 1.0 PROJECT OVERVIEW

### 1.1 Federal Nexus

The Biological Assessment (BA) has been prepared to address the potential effects of the proposed Oklahoma State Veterans Cemetery Development Project on the federally-listed threatened or endangered (T&E) species present in or known to migrate through Carter County, OK. Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended, requires that, through consultation with the U.S. Fish and Wildlife Service (USFWS), federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species or result in the destruction or adverse modification of critical habitat. The federal action agency associated with the proposed project is the U.S. Veterans Administration. This BA evaluates the potential effects of the proposed project on species that are federally listed under the ESA. Some wildlife species afforded by protection under the Fish and Wildlife Coordination Act, Migratory Bird Treaty Act and others are also addressed herein.

### 1.2 Project Description

The proposed project would involve site modification, leveling, grading, subterranean utility systems installation, in advance of cemetery infrastructure construction. The survey area is approximately 19 acres in size. The majority of the survey area consisted of mowed and maintained open field. The northwestern corner of the survey contains a forested riparian zone associated with an intermittent waterway. However, this area will not be affected by the proposed project. The general location of the project is shown on *Figure 1*.



### 1.3 Project Area Setting

#### *Project Location*

The proposed project is located north and west of the intersection of Myall and Commerce Streets in Ardmore, Oklahoma. The project area is located on the Ardmore West U.S. Geological Survey (USGS) 7.5-minute topographic map in Section 36, Township 4 South, Range 1 East in Ardmore, Carter County, Oklahoma.

#### *Ecoregion*

The project area is located within the tall grass prairie and oak savanna native to the rolling hills and plains of the Arbuckle Uplift, and developed over a unique mosaic of limestone, granite, dolomite, sandstone, and shale. Upland soils that were derived from limestone are usually shallow, moisture deficient, and erodible if disturbed; they are extensive and are now used as grazing land. Upland soils that developed from granite are sufficiently deep to permit farming. Cropland is common on floodplains. Stream substrates are typically composed of gravel, cobble, bedrock, or, particularly in the east, coarse sand. Most streams have some spring influence and many are dominated by spring flow, especially in the summer. Perennial, clear, cool streams are common.

## 2 FEDERALLY LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

The official list of threatened and endangered species potentially present within or adjacent to the action area was generated for the proposed project by the United States Fish and Wildlife Service’s on-line Information, Planning, and Conservation (IPAC) decision support system (USFWS, 2020). The federally-listed species and associated habitat requirements identified that could potentially be affected by the proposed project include the American burying beetle, least tern, piping plover, red knot, and Whooping Crane as shown in **Table 1**. The official species list and action area map obtained from the USFWS are provided in **Appendix A**. The Oklahoma Biological Survey’s Natural Heritage Inventory (ONHI) was also contacted to obtain any species occurrence records information on federal and state threatened, endangered or candidate species as well as any state-listed species of concern. No species occurrences were identified within the ONHI database concerning the proposed action area. The correspondence received from the ONHI is provided in **Appendix A**.

Identification of the dominant vegetative species was performed through transect and random sampling within the dominant and homogenous vegetation areas. The major habitat within the action area was documented and described to determine if the habitat requirements exist for the respective threatened or endangered species as having the potential to be present in or migrate through Carter County.

Table 1 - Federally Listed T&E Species			
Species/Critical Habitat	Listing Status	Habitat Requirements	Status within Action Area
American Burying Beetle ( <i>Nicrophorus Americana</i> )	Endangered	Breeding habitat: undisturbed, mature oak-hickory forests with substantial litter layers and deep, loose soils over grasslands or bottomland forests. Feeding habitat: undisturbed grasslands, grazed pasture, riparian zones, and oak-hickory forest, as well as a variety of various soil types.	Suitable habitat occurs within the northwest corner of the action area, however this portion of the property will not be affected. No suitable habitat was identified within the open, mowed, and maintained field within the action area.
Least Tern ( <i>Sterna antillarum</i> )	Endangered	Islands or sandbars along large rivers, mostly clear of vegetation for nesting and loafing and with shallow water nearby for fishing.	No suitable nesting or foraging areas were observed.

Table 1 - Federally Listed T&E Species			
Species/Critical Habitat	Listing Status	Habitat Requirements	Status within Action Area
Piping Plover ( <i>Charadrius melodus</i> )	Threatened	Migratory stopover habitat includes sparsely vegetated sandy or gravelly shorelines and islands associated with the major river systems. Species does not nest in OK.	No suitable foraging habitat present within the project corridor.
Red Knot ( <i>Calidris canutus rufa</i> )	Threatened	Coastal areas, mudflats on lakes or reservoirs, and may use sandbars along the major river systems for forage and resting areas. Species does not nest in OK.	Potentially suitable habitat was not identified with the project corridor.
Whooping Crane ( <i>Grus americana</i> )	Endangered	Foraging habitat includes a variety of wetland and other habitats, including coastal marshes and estuaries, inland marshes, lakes, ponds, wet meadows and rivers, and agricultural fields. Whooping cranes breed and nest in wetland habitat in Wood-Buffer National Park, Canada.	No suitable habitat for this species was identified within the action area. The Oklahoma Ecological Field Office reports that there is final critical habitat. The survey location is outside the critical habitat.

USFWS, 2020

### 3.0 ENVIRONMENTAL BASELINE

#### 3.1 Ecological Processes and Conditions

##### *Soils*

The Natural Resources Conservation Service (NRCS) Web Soil Survey was used to identify soil units within the study area (NRCS 2019). Multiple soil units are located within the proposed project area and are listed below:

- Normangee loam, 3 to 5% slopes
- Wilson Silt loam, 0 to 1% slopes
- Durant loam, 1 to 3% slopes
- Pulaski and Bunyan soils, 0 to 1% slopes

##### *Climate*

The climate is characterized as humid and mesothermal. The average annual precipitation is over 42 inches. The months of April through June are the wettest with a secondary peak between September and early November (Oklahoma Climatological Survey, 2019). The mean temperature is 61 degrees. The average daytime high is 94 degrees in July and in 26 degrees in January. Winds are predominantly from the south to southwest averaging 7 miles per hour.

##### *Vegetation*

The project area was approximately 19 acres in size. The majority of the action area is described as an open, mowed and maintained field. The dominant vegetation within the open field area consisted of Bermuda grass (*Cynodon dactylon*), henbit (*Lamium amplexicaule*), dandelion (*Taraxacum officinale*),

Johnson grass (*Sorghum halepense*), and yarrow (*Achillea millefolium*). The dominant within the forested riparian zone adjacent to the unnamed tributary was comprised of green brier (*Smilax rotundiflora*), pecan (*Carya illinoensis*), poison ivy (*Toxicodendron radicans*), Chinese privet (*Ligustrum sinense*), Japanese honeysuckle (*Lonicera japonicum*), dewberry (*Rubus caesius*), American sycamore (*Platanus occidentalis*), eastern red cedar (*Juniperus virginiana*), and water oak (*Quercus nigra*).

### **3.2 Species Habitat Within the Action Area**

The survey area was canvassed to identify and describe the habitat for the listed T&E species that could be present within the proposed action area. The federally listed species and their habitat requirements are provided below.

#### **American Burying Beetle**

The American Burying Beetle (ABB) is a large beetle with a shiny black appearance with four orange-red spots on the wing covers (elytra). A large red spot on the pronotum of the beetle is indicative of the species. The habitat requirements for this beetle are not fully known; however, the ABB is considered a habitat generalist and is known to occupy a diverse range of habitats. Habitats associated with the ABB include open grasslands, forests, as well as transitional areas. Suitable habitat was identified within the forested riparian zone located in the northwest corner of the project area. However, this portion of the property will not be affected by the proposed action. The majority of the surveyed area is characterized as an open, mowed, and maintained herbaceous field. No suitable habitat was observed within the proposed construction area.

#### **Least Tern**

The least tern is a small migratory shorebird that breeds along inland river systems in Oklahoma. The least tern typically arrives in April and occupies breeding sites from June through August and forages on small fish in shallow water along sandbars associated within large rivers and reservoirs. Nesting habitat includes bare and sparsely vegetated sand and gravel bars. Currently, they occur as small remnant colonies throughout their former range. In Oklahoma, the least tern nests along the Red River, Arkansas River, Cimarron River, and Canadian River, as well as at the Salt Plains National Wildlife Refuge (USFWS, 1985). Suitable foraging habitat for the least tern was not identified present and no suitable nesting areas were observed within the action area.

#### **Piping Plover**

The piping plover is a small, stocky, sandy-colored bird resembling a sandpiper. The habitat requirements for the piping plover include sandy shorelines on lakes and sandbars along the major river systems for forage and resting areas. The piping plover is migratory in Oklahoma in the spring and fall. They do not generally nest in Oklahoma. Plovers often gather in groups on undisturbed beaches prior to their southward migration. By mid-September, both adult and young plovers will have departed for their wintering areas (USFWS, 2011). Potentially suitable habitat for the piping plover was not observed within the action area.

#### **Red Knot**

The Red Knot is a rather large sandpiper that breeds in far northern Canada on tundra from May to June. Fall migrations typically begin in late July through mid-August where the species may travel as far as the coasts of South America. Migratory habitat requirements for the red knot include coastal areas, mudflats on lakes or reservoirs, and may use sandbars along the major river systems for forage and resting areas. This species is considered migratory in or through Oklahoma in the spring and fall. No potentially suitable habitat for this species was not identified.

### **Whooping Crane**

The Whooping Crane (*Grus americana*) occurs only in North America and is North America's tallest bird, with males approaching 1.5 m (5 ft) when standing erect. The whooping crane adult plumage is snowy white except for black primaries, black or grayish alula (specialized feathers attached to the upper leading end of the wing), sparse black bristly feathers on the carmine crown and malar region (side of the head from the bill to the angle of the jaw), and a dark gray-black wedge-shaped patch on the nape. The common name "whooping crane" probably originated from the loud, single-note vocalization given repeatedly by the birds when they are alarmed. Whooping cranes are a long-lived species; current estimates suggest a maximum longevity in the wild of at least 30 years. No suitable habitat for Whooping Cranes were identified within the project area.

### **Bald Eagle**

The Bald Eagle (*Haliaeetus leucocephalus*) is a raptor protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Activities that would disturb eagles are prohibited under the Bald and Golden Eagle Protection Act. "Disturb" means to agitate an eagle to the degree that causes or is likely to (1) cause injury, (2) interfere with breeding, feeding or sheltering behavior, or (3) nest abandonment. The bald eagle prefers large trees or high cliffs along large waterways for perching and nesting purposes. Fish is the preferred diet of eagles, but they also eat small mammals, waterfowl, turtles and dead animals. Preferred foraging areas include quiet coastal areas, rivers or lakeshores with large tall trees. Methods used to identify suitable habitat included investigations of waterbodies potentially used for foraging, large nesting or perching trees adjacent to such water features and other areas which Bald Eagles are known to use. Potential or suitable habitat was identified within the action area. However, no Bald Eagles or nests were observed during the site visit. This project is not expected to impact the Bald Eagle.

### **Migratory Birds**

Migratory bird species are protected under the Migratory Bird Treaty Act (MBTA) as amended. The MBTA prohibits the take of any migratory bird without authorization for the USFWS. While suitable nesting habitat was identified within the forested area, no bird nests were observed. The open field portion of the action area is frequently mowed and maintained and did not exhibit suitable nesting habitat.

On January 16 & 17, 2020, a field survey was conducted by Eagle Environmental Consulting. The observed habitats were evaluated during the pedestrian survey to identify the different types of vegetative communities. Four (4) habitat assessment sample sites (HASS) were utilized to identify and describe the dominant habitats within the action area to determine if any of the federally-listed T&E species or their habitat were present. The descriptions for each are provided below. Soil characteristics were also investigated for confirmation of accurate mapping. Photographs of the project area are provided at **Appendix B**. Habitat assessment sample site locations are shown **on Figure 2**.

**HASS-1, 3, & 4** were located within the actively mowed and maintained open field area. The observed dominant vegetation consisted of Bermuda grass, henbit, dandelion, Johnson grass, and yarrow.

**HASS-2** is associated with the forested riparian area on the oxbow. The dominant within the forested riparian zone adjacent to the unnamed tributary was comprised of green brier, pecan, poison ivy, Chinese privet, Japanese honeysuckle, dewberry, American sycamore, eastern red cedar, and water oak.



## 4.0 ANALYSIS OF EFFECTS

### 4.1 Direct Effects

Direct effects within the action area would consist of earth movement operations associated with utility system installation, subsurface drainage systems, levelling, and infrastructure construction. The primary habitat disturbance would be associated with the open and maintained herbaceous field. All temporarily disturbed soils within the construction corridor will be restored to pre-construction contour to the extent practicable and revegetated using native vegetation. The survey area is approximately 19 acres in size and will be subject to routine maintenance which may include mowing and/or herbicide treatment upon project completion. None of the federally listed T&E species or their habitat were confirmed as present within the proposed construction or development areas.

### 4.2 Indirect Effects

No other development associated with proposed project is expected. No uses or projects are anticipated that would be tangential to the proposed. Provided no additional habitat disturbances are undertaken, the proposed project should have no indirect effects on the listed species other than described.

### 4.3 Interrelated and Interdependent Actions and Activities

This biological assessment addressed the potential impacts to regulated species associated with the proposed project phase. No immediate interrelated or interdependent actions are expected or planned as the result of the proposed project.

## 5.0 CONCLUSION

### Threatened and Endangered Species

The proposed project should have a no effect determination for the American Burying Beetle, Least Tern, Piping Plover, Red Knot, or Whooping Crane based on the lack of suitable habitat and project area location within the City of Ardmore and surrounded by commercial as well as residential development. Coordination with the ONHI did not identify any federally-listed or other species of concern within or near the action area. The Species Conclusion Table (*Table 2*) below provides the documentation and rationale relative to the potential affect to each of the federally-listed species:

Species/Critical Habitat	Habitat Determination	USFWS Consultation	ESA Determination
Least Tern	No Suitable Habitat Present	Not Required	No Effect
Piping Plover	No Suitable Habitat Present	Not Required	No Effect
Red Knot	No Suitable Habitat Present	Not Required	No Effect
American Burying Beetle	Potentially Suitable Habitat Present	Not Required	No Effect, Suitable Habitat Areas will not be affected.
Whooping Crane	No Suitable Habitat Present	Not Required	No Effect

### **Bald Eagle**

Limited potential or suitable habitat was identified within the action area for the bald eagle. No bald eagles or nests were observed during the site visit. The project is not expected to impact the bald eagle.

### **Migratory Birds**

Suitable nesting habitat is present within the project area. However, no bird nests were observed within the area planned for the proposed action. No active swallow nests were observed within the action area. Construction is encouraged to occur between August 15 and March 31 to avoid the nesting season to avoid potential impact to migratory birds. Suitable habitat for non-migratory ground nesting birds is also present and construction is encouraged to occur during the same time frame. Provided construction can be conducted within the non-nesting season, no adverse effects are anticipated to non-migratory birds. While suitable habitat may be present for other BCC (primarily in the northwest corner of the survey area), none were identified during this field survey.

## **6.0 REFERENCES**

- Natural Resources Conservation Service. 2020. Web Soil Survey. Accessed on February 27, 2020 at <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>
- Oklahoma Climatological Survey. 2020. The climate of Carter County.
- Oklahoma Natural Heritage Inventory. 2020. Species Occurrences Records.
- U.S. Fish and Wildlife Service. 1985. Interior population of the Least Tern Determined to be Endangered. Federal Register, Volume 50, Number 102, 21784-21792.
- U.S. Fish and Wildlife Service, 2011. Piping Plover Fact Sheet. Oklahoma Ecological Services Office.
- United States Fish and Wildlife Service. 2020. Information, Planning, and Conservation (IPAC) decision support system - Official Species List received March 27, 2020.
- Woods, A.J., J.M. Omernik, D.R. Butler, J.G. Ford, J.E. Henley, B.W. Hoagland, D.S. Arndt, and B.C. Moran. 2005. Ecoregions of Oklahoma (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,250,000).

## APPENDIX A

USFWS and ONHI Records



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Oklahoma Ecological Services Field Office  
9014 East 21st Street  
Tulsa, OK 74129-1428  
Phone: (918) 581-7458 Fax: (918) 581-7467  
<http://www.fws.gov/southwest/es/Oklahoma/>

In Reply Refer To:

March 27, 2020

Consultation Code: 02EKOK00-2020-SLI-1359

Event Code: 02EKOK00-2020-E-03343

Project Name: OK State Veterans Cemetery

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Non-federal entities conducting activities that may result in take of listed species should consider seeking coverage under section 10 of the ESA, either through development of a Habitat Conservation Plan (HCP) or, by becoming a signatory to the General Conservation Plan (GCP) currently under development for the American burying beetle. Each of these mechanisms provides the means for obtaining a permit and coverage for incidental take of listed species during otherwise lawful activities.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit through our Project Review step-wise process <http://www.fws.gov/southwest/es/oklahoma/OKESFO%20Permit%20Home.htm>.

---

Attachment(s):

- Official Species List
  - USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Oklahoma Ecological Services Field Office**

9014 East 21st Street

Tulsa, OK 74129-1428

(918) 581-7458

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## Project Summary

Consultation Code: 02EKOK00-2020-SLI-1359

Event Code: 02EKOK00-2020-E-03343

Project Name: OK State Veterans Cemetery

Project Type: DEVELOPMENT

Project Description: Develop new veterans cemetery

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/34.159372334587644N97.14747011661531W>



Counties: Carter, OK

---

## Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Birds

NAME	STATUS
<p>Least Tern <i>Sterna antillarum</i></p> <p>Population: interior pop.</p> <p>No critical habitat has been designated for this species.</p> <p>This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> <li>▪ Towers (i.e. radio, television, cellular, microwave, meterological)</li> <li>▪ Wind Turbines and Wind Farms</li> </ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/8505">https://ecos.fws.gov/ecp/species/8505</a></p>	Endangered
<p>Piping Plover <i>Charadrius melodus</i></p> <p>Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.</p> <p>There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a></p>	Threatened
<p>Red Knot <i>Calidris canutus rufa</i></p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a></p>	Threatened
<p>Whooping Crane <i>Grus americana</i></p> <p>Population: Wherever found, except where listed as an experimental population</p> <p>There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/758">https://ecos.fws.gov/ecp/species/758</a></p>	Endangered

---

## Insects

NAME	STATUS
<p>American Burying Beetle <i>Nicrophorus americanus</i> Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/66">https://ecos.fws.gov/ecp/species/66</a></p>	Endangered

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

- 
1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<b>Bald Eagle <i>Haliaeetus leucocephalus</i></b> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Sep 1 to Jul 31
<b>Harris's Sparrow <i>Zonotrichia querula</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

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NAME	BREEDING SEASON
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

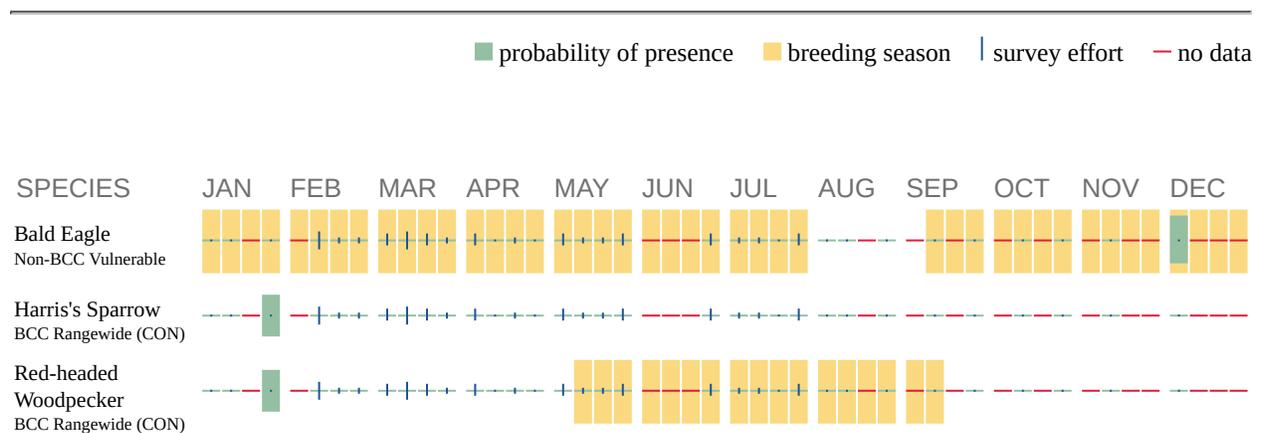
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

### No Data (–)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

## Migratory Birds FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding

in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

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Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In

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contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

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# Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

## FRESHWATER FORESTED/SHRUB WETLAND

- [Palustrine](#)

## RIVERINE

- [Riverine](#)
-

OBS Ref. 2020-040-BUS-EAG

Dear Mr. Votaw,

Jan. 10, 2020

We have reviewed occurrence information on federal and state threatened, endangered or candidate species, as well as non-regulatory rare species and ecological systems of importance currently in the Oklahoma Natural Heritage Inventory database for the following location you provided:

Sec. 36-T4S-R1E, Carter County

We found no occurrences of relevant species within the vicinity of the project location as described. However, absence from our database does not preclude such species from occurring in the area.

If you have any questions about this response, please send me an email, or call us at the number given below.

Although not specific to your project, you may find the following links helpful.

ONHI guide to ranking codes for endangered and threatened species:  
[http://vmpinzel.ou.edu/heritage/ranking\\_guide.html](http://vmpinzel.ou.edu/heritage/ranking_guide.html)

Information regarding the Oklahoma Natural Areas Registry:  
[http://www.oknaturalheritage.ou.edu/registry\\_faq.htm](http://www.oknaturalheritage.ou.edu/registry_faq.htm)

Todd Fagin  
Oklahoma Natural Heritage Inventory  
(405) 325-4700  
tfagin@ou.edu

## APPENDIX B

### REPRESENTATIVE HABITAT PHOTOS

HASS 1:



HASS 3:



HASS 2:



HASS 4:





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**APPENDIX E**

**PHASE I ENVIRONMENTAL SITE ASSESSMENT**

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# PHASE 1 ENVIRONMENTAL SITE ASSESSMENT



Oklahoma State Veterans Cemetery  
Myall & Commerce Streets  
Ardmore, OK 73401

Prepared for:

Oklahoma Dept. of Veterans Affairs  
2131 NE 36<sup>th</sup> Street  
Oklahoma City, OK 73111-3105



Prepared by:



*P.O. Box 335  
Vinita, Oklahoma 74301*

*9 North 9<sup>th</sup> Street  
Fort Smith, Arkansas 72901*



March 2020

Steven R. Votaw  
President



# PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

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# PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

## Oklahoma State Veterans Cemetery Oklahoma Department of Veterans Affairs Ardmore, Carter County, Oklahoma

### EXECUTIVE SUMMARY

- On March 10, 2020 Environmental Data Resources provided the current environmental regulatory database information in accordance with ASTM 1527-13 search distances.
- On February 18, 2020, a field survey was conducted by Steve Votaw and Sean Votaw of Eagle Environmental Consulting (EEC).
- The results of environmental records search identified within the federal/state databases are provided below:

Target Property Address:  
MYALL SW AND COMMERCE STREETS  
ARDMORE, OK 73401

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	DEPARTMENT OF VETERA	1015 S COMMERCE	UST, HIST UST	Higher	306, 0.058, East
2	LASLEY ONE STOP	1136 S COMMERCE	UST, HIST UST	Higher	1309, 0.248, East
3	GILT EDGE FARMS	1312 S COMMERCE	LUST, UST, HIST UST	Lower	1826, 0.346, SE
4	BOB SHIREY PHILLIP 6	718 S COMMERCE	LUST, UST, HIST UST	Higher	2410, 0.456, NNE

# PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

## OVERVIEW MAP - 6002813,2S



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites

- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory



# PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

## DETAIL MAP - 6002813.2S



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory

This report includes Interactive Map Layers in

# PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

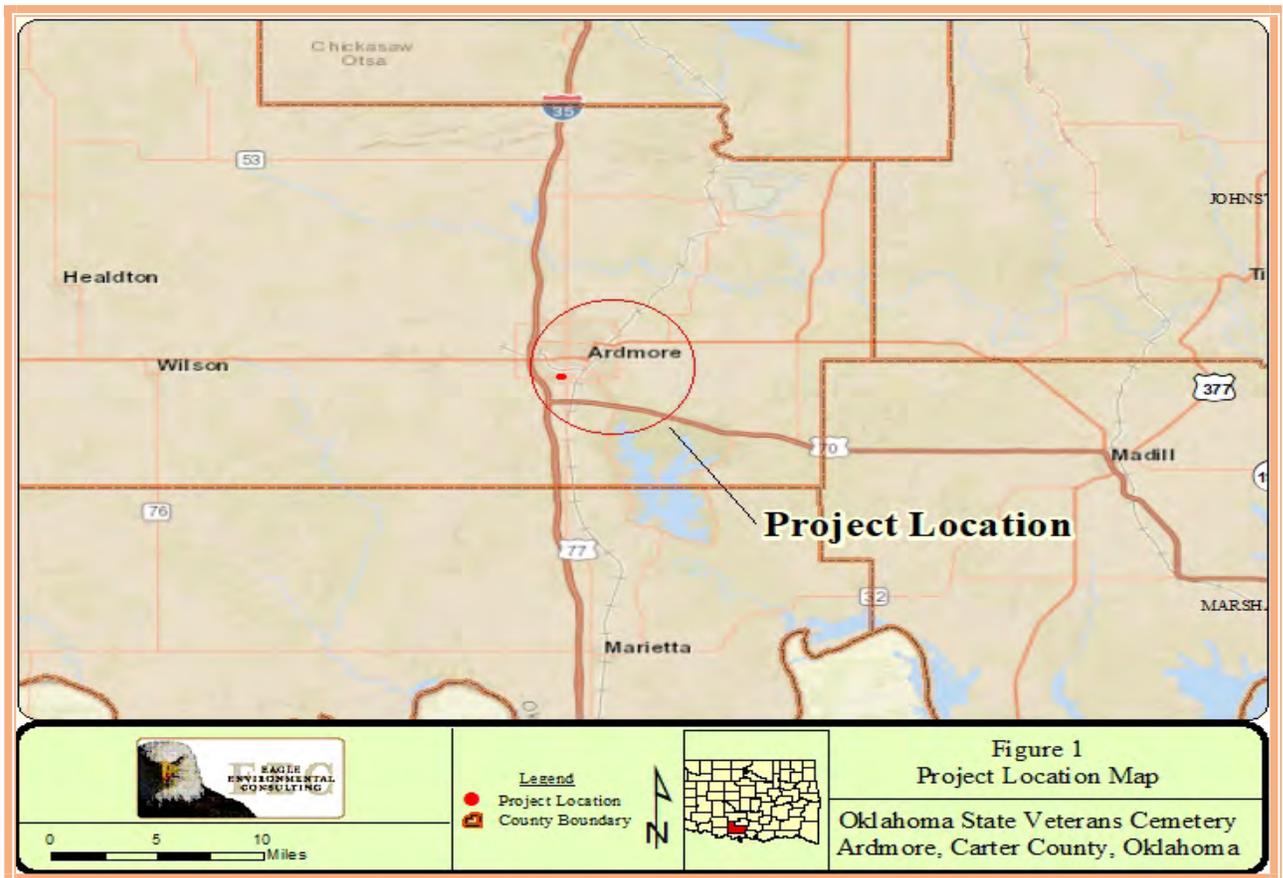
## 1.0 INTRODUCTION

### 1.1 Purpose

The purpose of the Phase I Environmental Site Assessment (ESA) was to identify any recognized environmental conditions present on or adjacent to the subject property which may pose a potential liability. The term recognized environmental conditions (REC) means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to any release to the environment under conditions indicative of a release to the environment or under conditions that pose a material threat of a future release to the environment. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not considered recognized environmental conditions. The intent of the assessment was to satisfy one of the requirements necessary to qualify for the innocent landowner defense against liability under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) constituting all appropriate inquiry.

### 1.2 Terms and Conditions

Eagle Environmental Consulting, (EEC) performed a Phase I ESA on approximately 20 acres of land located on the northwest corner of Myall and Commerce streets Ardmore, Carter County, Oklahoma. The property is located in Sections 36 of Township 4 South, Range 1ff East. **Figure 1** shows the general property location. **Figure 2** shows the subject property and photo locations.



# PHASE 1 ENVIRONMENTAL SITE ASSESSMENT



 <p>Scale: 1" = 100 FT</p>	<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="border: 1px solid red; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Study Area</li> <li><span style="color: yellow; font-size: 15px; margin-right: 5px;">●</span> Photo Location</li> </ul>	<p>Project Vicinity Map</p> 	<p><b>Figure 2</b> Target Property &amp; Photo Location Map</p> <p>Oklahoma State Veterans Cemetary Ardmore, Carter County, Oklahoma</p>
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## PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

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The ASTM Standard Practice E 1527-13, entitled, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, was used as guidance to conduct the Phase I ESA for the property and adjacent areas to identify areas of environmental concern. The use of ASTM E 1527-13 is in compliance with the Environmental Protection Agency (EPA) All Appropriate Inquiries Final Rule. The Phase I ESA was conducted and a report prepared for the sole use by the Client. EEC will keep confidential and not disclose to any person or entity, without prior written consent of the Client, any data or information generated in conjunction with the performance of the Phase I ESA. Provisions of confidentiality shall not apply to data or information obtained from the public domain or acquired from third parties not under obligation to the Client for confidentiality.

### 1.3 Limitations and Exceptions

This Phase I ESA is not a comprehensive property characterization and should not be construed as such. The findings and opinions conveyed via this Phase I ESA are based on information obtained from a variety of sources identified herein, which EEC believes to be reliable. However, EEC has no control over regulatory databases, agency information releases, testing and analysis services, interviewed personnel response, or third party generated information, and therefore, disclaims any responsibility for errors and omissions arising therefrom. The conclusions set forth in this report are limited by the data presented in this report and the limited investigation performed by EEC under the Phase I ESA. Since the development of this Phase I ESA did not involve the sampling of soil, rock, groundwater, surface water, or air; it is, therefore, not possible to confirm the presence or absence of toxic or hazardous substances, waste or materials in the environments associated with the property. The photographs and maps included within this Phase I ESA are presented for the purpose of assisting the reader in visualizing the property. The findings of this report are valid as of the date of the investigation. However, changes in the conditions of the property can occur with the passage of time, whether due to natural processes or anthropogenic activities on this or adjacent properties. In addition, changes in applicable appropriate standards may occur resulting from legislation, broadening of knowledge, or other reasons.

EEC assumes no responsibility to monitor any changes at the property or to advise if there are any changes as to what constitute hazardous materials substances or petroleum products. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside of EEC control. EEC does not claim responsibility for any incorrect information that may have been supplied by agencies, organizations or individuals that may be included in the findings of this report. EEC cannot be held liable due to remote and rugged property setting, complete visibility of all portions of said property could not be observed and any REC's that may not be visible.

This Phase 1 ESA does not address the other environmental concerns that do not fall within the ASTM's definition of recognized environmental conditions. Examples of other environmental concerns that do not fall under ASTM recognized environmental conditions include:

- Asbestos-containing materials (ACM) in structures on the property.
- Lead-based paint on structures on the property.
- Regulatory restrictions related to wetlands, aquifer recharge zones, endangered species habitats, or other environmentally sensitive settings.
- Health and Safety.
- Cultural and historic resources.

# PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

## 1.4 Assessment Methods

The Phase I ESA consisted of the following components:

- **Records Review** - Review of records that are a matter of public record regarding facilities associated with the Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the EPA Emergency Response Notification System (ERNS), Toxic Release Inventory System (TRIS), underground storage tanks (USTs), leaking underground storage tanks (LUSTs) and permitted solid waste disposal and processing facilities.
- **Site Reconnaissance** - Property visit to document the present surface conditions, physical characteristics and general appearance of the property and to examine all outdoor areas of the subject property looking for evidence of environmental impact, degradation and potential environmental hazards.
- **Interviews** – Interviews with present owners, past owners, and occupants of a property, in addition to state and/or local government officials is required by this standard practice to obtain information indicating recognized environmental conditions in connection with the property.
- **Assessment Report** – The preparation of a Phase I ESA report that documented observations and information collected about the property and to present findings and recommendations. This study did not include a subsurface investigation.

## 2.0 GENERAL SITE SETTING

### 2.1 Current Use of the Property

The property under assessment includes approximately 20 acres of land which is mowed and maintained. Representative photographs of the property are provided in **Appendix A**.

### 2.2 Past Use of the Property

The current landowner provided information about the previous landowner(s) in **Appendix D**.

#### 2.2.1 Historical Aerial Photography

Aerial photography was reviewed and provided by Environmental Data Resources (EDR) for dates provided below. Historical photographs are provided in **Appendix B**.

Photo Year	Land Use	Comments/Remarks/Changes
1954	Developed	The land appears to have been moderately developed with a pond on the south-central part of the target property.
1962	Developed	No visible changes appear to have been made to the target property between 1954 and 1962.
1969	Developed	No visible changes appear to have been made to the target property between 1962 and 1969.
1970	Developed	No visible changes appear to have been made to the target property between 1969 and 1970.
1981	Developed	No visible changes appear to have been made to the target property between 1970 and 1981.
1995	Developed	No visible changes appear to have been made to the target property between 1981 and 1995.
2006	Developed	The pond on the target property appears to be filled in between 1995 and 2006.
2010	Developed	No visible changes on the aerial photos to the target property between the years 2006 & 2010.

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Photo Year	Land Use	Comments/Remarks/Changes
2013	Developed	No visible changes on the aerial photos to the target property between the years 2010 & 2013.
2017	Developed	No visible changes on the aerial photos to the target property between the years 2013 & 2017.

### 2.2.2 City Directories

A city directory search was not conducted for the property by EDR due to limitation of data usage.

### 2.2.3 Sanborn Maps

The Sanborn library collection was searched for fire insurance map coverage. The property was not found within the holdings of the Sanborn Library collection. Sanborn map documentation is provided in **Appendix C**.

### 2.3 Current Uses of the Adjoining Property

The target property is bordered on the west and south by residential areas. East of the target property is a relatively new commercial building (bank) and an old farmstead that appears to be actively used for livestock holding. Old barns were observed. The property to the north appears to be undeveloped forested and open areas and is believed to be associated with the existing ODVA Ardmore Office complex. The developed part of the ODVA complex begins at the northeast corner of the target property.

### 2.4 Past Uses of the Adjoining Property and Surrounding Areas

Aerial photography was obtained from EDR and provided in **Appendix B**.

Photo Year	Land Use	Comments/Remarks/Changes
1955-2017	Agriculture, Institutional, Residential and/or Commercial	Surrounding properties appear to have remained essentially the same based on historical aerial photographs.

### 2.5 General Description of Structures

The target property is essentially undeveloped. Two residential structures, one detached garage, and one masonry-type building are present in the northeast corner of the target property. Both are homes that appear to have been constructed in the 1970's. The current owner did not provide the date of the homes or other building. Both structures are in use and in excellent condition. No structures were entered due to privacy reasons. The masonry building near the residential structures appeared to be used for storage. Access was not possible.

### 2.6 Roads

Access to the property is provided from Myall and Commerce streets. Only one road (asphalt) was observed within the target property which is part of the existing ODVA office complex. One short section of gravel road base was observed in the northeast corner of the parcel and is connected to the asphalt road.

### 2.7 Potable Water Supply

- Potable water supply provided by City of Ardmore.
- Potable water supply provided by private water well.

## PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

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Potable water supply is not provided with this property.

### **2.8 Sewage Disposal System**

The sewage disposal is connected to the City of Ardmore municipal system.

Sewage disposal is connected to a septic system with a lateral field.

No sewage disposal system is associated with the evaluated property.

### **3.0 USER PROVIDED INFORMATION**

#### **3.1 Title Records**

The user of the Phase 1 ESA is Oklahoma Department of Veterans Affairs. Title information provided by the owner indicated ODVA received the subject property by transfer from the University of Oklahoma in 1949.

#### **3.2 Environmental Liens or Activity and Use Limitations**

The current owner is not aware of any environmental liens or use limitations of the property. Based on the search of state and federal environmental database records conducted by EDR, no liens or use limitations were identified associated with the property (See Appendix E).

#### **3.3 Specialized Knowledge**

The current user has specialized knowledge of the property and completed the use questionnaire. No obvious or known issues were reports.

#### **3.4 Commonly Known or Reasonably Ascertainable Information**

The user or owner stated in the questionnaire that they are the most knowledgeable about the target property and did not identify any environmental concerns or issues.

#### **3.5 User Provided Response to Questionnaire**

The All Appropriate Inquiries user questionnaire was obtained from the user on March 3, 2020. The completed user questionnaire is provided in Appendix D.

### **4.0 RECORDS REVIEW**

#### **4.1 Standard Environmental Record Sources**

On March 10, 2020, Environmental Data Resources, Inc. (EDR) conducted a search of state and federal environmental database records. The searches met the specific requirements of ASTM Standard Practice for Environmental Site Assessments. The target property was listed as having an underground storage tank as identified in the databases searched by EDR. The information obtained from the EDR database search is found in Appendix E.

##### **4.1.1 Federal CERCLIS/ SEMS List**

The Superfund Enterprise Management System (SEMS) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States.

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The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015. The Superfund program was created to protect citizens from the dangers posed by abandoned or uncontrolled hazardous waste sites. In 1980, Congress established the Superfund program by passing the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Information System (CERCLIS) which provides the Federal government the authority to respond to hazardous substance emergencies, and to develop long-term solutions for the nation's most serious hazardous waste problems. The CERCLIS database contains information on hazardous waste sites, potentially hazardous waste sites and remedial activities conducted across the nation.

- No SEMS sites were identified within ½ mile of the property.
- SEMS site(s) were identified within ½ mile of target property.

### 4.1.2 National Priorities List (NPL)

The National Priorities List identifies “Superfund” sites that have had documented contamination. The CERCLIS database includes sites that are on the NPL or being considered for the NPL.

- No NPL sites were identified within ½ mile of the property.
- NPL sites were identified within ½ mile of the property.

### 4.1.3 Delisted NPL Sites

The Delisted National Priorities List identifies “Superfund” sites with documented contamination that have been satisfactorily resolved, cleaned, removed, and/or closed according to specified state/federal regulatory requirements.

- No Delisted NPL sites were identified within ½ mile of the property.
- Delisted NPL sites were identified within ½ mile of the property.

### 4.1.4 CERCLIS No Further Remedial Action Planned Site

Potential hazardous waste sites that have been assessed and require no further remedial action planned (NFRAP) have been removed from CERCLIS.

- No CERCLIS NFRAP sites were identified within ½ mile of the property.
- CERCLIS NFRAP sites were identified within ½ mile of the property. **See Section 4.1.1 for details.**

### 4.1.5 Resource Conservation and Recovery Act (RCRA) CORRACTS Facilities

Facilities that store, treat, or dispose of hazardous waste are responsible for investigating and cleaning their facilities. The EPA refers to this clean-up requirement as corrective action. The USEPA Corrective Action Report (CORRACTS) identifies hazardous waste handlers with RCRA corrective action activity.

- No RCRA CORRACTS Facilities were identified within ½ mile of the property.
- RCRA CORRACTS Facilities were identified within ½ mile of the property.

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### 4.1.6 RCRA Non-CORRACTS Treatment, Storage, and Disposal Facilities

This database includes selective information on sites which transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act. TSD's are facilities that treat, store, or dispose of hazardous waste.

No RCRA Non-CORRACTS Facilities were identified within ½ mile of the property.

RCRA Non-CORRACTS Facilities were identified within ½ mile of the property.

### 4.1.7 RCRA Generators List

RCRAInfo is the Environmental Protection Agency's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

No RCRA Generators were identified within ½ mile of the property.

RCRA Generators were identified within ½ mile of the property.

### 4.1.8 Federal, State, and Tribal Institutional Controls/Engineering Control Registries

Institutional controls are legal or administrative measures that limit human exposure to hazardous waste or hazardous constituents. Examples include use control areas, easements, zoning restrictions, and deed notices. They are intended to bolster the integrity of remedies and minimize the potential exposure to contamination by limiting land or resource use. Institutional controls are typically used any time contaminants are left in place at cleanup levels that are based on restricted site uses. In addition, institutional controls may be required during implementation of a remedy that will eventually achieve unrestricted site use cleanup levels but will take a long time, for example, for sites undergoing long term groundwater remediation and sites where a monitored natural attenuation remedy is approved. Institutional controls are generally used in conjunction with, rather than in lieu of, engineering measures, such as waste treatment or containment.

No sites with institutional or engineering controls were identified on the property.

Sites with institutional or engineering controls were identified on the property.

### 4.1.9 Emergency Response Notification System (ERNS) List

The U.S. EPA Emergency Response Notification System (ERNS) is a computer database containing information on release notifications of oil and hazardous substances that have occurred throughout the United States and have been reported to the National Response Center (NRC). The NRC is the sole federal point of contact for reporting oil and chemical spills. Releases are recorded when they are initially reported to the federal government by any party.

No known reported releases of oil or hazardous substances were identified for this property.

Reported releases of oil or hazardous substances were identified for this property.

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### 4.1.10 State and Tribal Equivalent NPL and CERCLIS

- No state or Tribal NPL equivalent sites were identified within 1 mile of the property and no CERCLIS equivalent sites were identified within ½ mile of the property.
- State or Tribal NPL equivalent sites were identified within 1 mile of the property.

### 4.1.11 Tribal Landfills or Solid Waste Disposal Sites

- No Tribal permitted solid waste disposal or processing facilities were located on or within a ½ mile radius of the property.
- Tribal permitted solid waste disposal or processing facilities were located on or within a ½ mile radius of the property.

### 4.1.12 State Landfill or Solid Waste Disposal Sites

- No State landfill or solid waste disposal or processing facilities were located on or within a ½ mile radius of the property.
- State landfill or solid waste disposal or processing facilities were located on or within a ½ mile radius of the property.

### 4.1.13 State and Tribal Registered Underground Storage Tanks (UST)

The Oklahoma Department of Environmental Quality (ODEQ) enforces state and federal regulations and administers certain assistance programs applicable to the storage, quality, and delivery of refined petroleum products (i.e., gasoline and other fuels) and records information on the release of petroleum products. EDR was used to identify the location of any underground (UST), aboveground (AST) or leaking underground storage tanks (LUST). No tanks were identified or recorded at the target property.

Date of Regulatory Agency Inquiry:	March 10, 2020	Source:	EDR	Agency:	ODEQ
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Owner Name	Facility ID	Capacity (gal)	Contents	Installed	Closed	Identified Issues	Current Status
Oklahoma Department of Veterans Affairs	1013401	3000	Gasoline	Not reported	3/09/1994	NA	Permanently out of use
Lasley One Stop	1005159	1 - 6000 1 - 8000	Unknown	5/01/1979	NA	NA	In use

Date of Regulatory Agency Inquiry:		Source:		Agency:	
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Monitoring Wells Observed	Location	Identified Issues	Current Status
None			

## PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

### 4.1.14 State and Tribal Leaking Underground Storage Tanks (LUST)

The EDR database was searched to identify the location of any leaking underground storage tanks within the standard search radii.

- No LUST's were located on or within the subject property
- LUST's were located on or within the subject property.
- LUST's were located within ½ mile of the target property. Both sites identified within 0.50 miles, one upgradient and one downgradient. Other than confirmed release, no other issues were identified and both cases were reported as closed with no further action.

The following table provides the LUST information obtained through database records evaluation (if present):

Owner	Number	Capacity (gal)	Contents	Installed	Removed	Identified Issues	Current Status
Gilt Edge Farms	064-2480	2000	Diesel	Unknown	2/21/2008	Confirmed release	Closed
Bob Shirley Phillips 66	064-0491	2000	Gasoline	5/3/1981	7/1/1993	Confirmed release	Closed
Date of Regulatory Agency Inquiry:		March 10, 2020		Source:	EDR		Agency: ODEQ

### 4.1.15 State and Tribal Voluntary Cleanup (VCP) Sites

The voluntary cleanup program provides an opportunity for private parties and government entities to clean up properties that may be contaminated. Sites within the program can range in size and contain single or multiple sources of contamination.

- No VCP sites were identified within a ½ mile of the subject property.
- VCP sites were identified within a ½ mile of the subject property.

### 4.1.16 State and Tribal Brownfields Sites

Brownfields are defined by Oklahoma law as abandoned, idle or underused industrial or commercial facilities or other real property at which expansion or redevelopment of the real property is complicated by environmental contamination caused by regulated substances. Documentation provided by EDR is located in **Appendix E**.

- No Brownfields sites were identified within a ½ mile of the subject property.
- Brownfields sites were identified within a ½ mile of the subject property.

## 4.2 Physical Setting Sources

### 4.2.1 Topographic/Hydrologic/Geologic/Hydrogeologic Conditions

The property is located on the Ardmore West 7.5-minute USGS topographic map. Elevation at the property is approximately 848 ft. Surface water runoff flows generally west.

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The property is underlain by Paleozoic era, Pennsylvanian system, Virgilian series rock. Soils of the target property is comprised of Normangee loam (moderately well drained), Wislon silt loam (moderately well drained), Pulaski fine sandy loam (well drained), Durant loam (moderately well drained), Normangee clay loam (moderately well drained), Clarita silty clay (moderately well drained),

### 5.0 SITE RECONNAISSANCE

#### 5.1 Property Observations

On February 18, 2020, Steve Votaw and Sean Votaw of EEC performed the site reconnaissance survey at the target property. The property is described as essentially vacant with no obvious land use. The majority of the property is open field that is mowed and maintained. The northwestern portion of the property is forested riparian zone associated with a small waterway. Two residential, on garage, and one masonry building were observed in the northeast corner of the property. No obvious evidence of recognized environmental conditions were observed.

#### 5.1.1 Hazardous Substances and Petroleum Products in Connection with Identified Uses

- No petroleum products or hazardous substances were observed at the subject property.
- Petroleum products or hazardous substances were observed at the subject property. One above ground fuel tank was observed in the northeast corner of the target property and is located on a concrete pad. Tanks appears to be in use by ODVA and used to store/dispense gasoline and diesel fuel. No spillage or issues were identified at said tank.

#### 5.1.2 Other Storage Tanks

The following information is provided relative to the storage tank identification within the subject property:

Tank Type	Number	Capacity (gal)	Contents	Installed	Removed	Identified Issues	Current Status
AST - ODVA	1	UNK	Diesel & Gasoline	UNK	-----	None	Active

Regulatory Agency Interview Conversation Record:

None identified in database records.

Other Tanks	Tank Type	Location	Contents	Current Status
NA				

#### 5.1.3 Odors

- No odors or vapors were identified at the target property.
- Odors or vapors were identified at the subject property adjacent to the used oil drums.

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### 5.1.4 Pools of Liquid

- No pools of liquid or hazardous or petroleum substances were observed at the target property.
- Pools of liquid or hazardous or petroleum substances were observed at the target property.

### 5.1.5 Drums

- No drums were identified within the target property.
- Drums were identified within the subject property.

### 5.1.6 Hazardous Substance and Petroleum Products Containers

- No hazardous substances or containers were observed at the target property.
- Hazardous substances or containers were observed at the target property. Substances identified as diesel fuel and gasoline stored in above ground tank. No issues identified.

### 5.1.7 Unidentified Substance Containers

- No unidentified substance containers were observed at the target property.
- Unidentified substance containers were observed at the target property.

### 5.1.8 PCB's

Polychlorinated Biphenyls (PCBs) were used as a dielectric fluid in transformers, capacitors, and ballasts prior to the Toxic Substance Control Act of 1976. The EPA banned further manufacture of equipment containing PCB's in 1979.

- No transformers, capacitors, ballasts were observed at the subject property.
- Transformers were observed at the property and no leakage was observed.

## 5.2 Interior Observations

### 5.2.1 Heating/Cooling

- There is no obvious energy source at the target property.
- The energy source was electric. Residential structures. Electric lines appear to be present along the southern property perimeter adjacent to Myall Street.

### 5.2.2 Stains or Corrosion

- No obvious areas of staining and/or corrosion were observed at the target property.
- Minor rust staining was observed.

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### 5.2.3 Drains and Sumps

No drains, sumps, or storm drains were observed at the target property.

Drains, sumps, or storm drains were observed at the target property.

### 5.3 Exterior Observations

#### 5.3.1 Pits, Ponds, or Lagoons

No pits or lagoons were observed at the target property. However, one former pond was identified at the target property through historical imagery review. The pond has been filled and is no longer present.

Pits, ponds, or lagoons were observed adjacent to the subject property.

#### 5.3.2 Stained Soil or Pavement

No stained soils or pavement was observed at the subject property.

Stained soils or pavement was observed at the subject property.

#### 5.3.3 Stressed Vegetation

No stressed vegetation was observed at the subject property.

Stressed vegetation was observed at the subject property.

#### 5.3.4 Solid Waste

No trash and/or refuse receptacles were observed at the subject property.

Solid waste was observed at the property. A small dump area of primarily concrete rubble and some limber materials was observed along the northern property boundary within the forested area adjacent to the small waterway.

#### 5.3.5 Wastewater

No wastewater was observed at the subject property.

Wastewater was observed at the property.

#### 5.3.6 Wells

The Oklahoma Water Resources Board groundwater wells standards and protection interactive mapping was accessed on January 24, 2020. No water well locations were identified at the property on interactive mapping. The Oklahoma Corporation Commission Website Data Miner was used to search for oil and gas locations at the property. No wells were observed that related to the property. No oil and gas wells were observed at the property. The EDR radius report did not report any water wells or oil and gas wells at the property.

Water wells were identified at the property associated with the UST detection system.

Water wells were identified. Ten within 1/8-1/4 mile of the property. Fifteen within 1/4 - 1/2 mile of the

## PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

property. Sixteen within ½-1 mile of the property.

No water wells were identified at the property.

No oil and gas wells were identified within the subject property.

Oil and gas wells were identified.

Comments/Remarks:

### 5.3.7 Septic System

Since 1992, the Oklahoma Department of Environmental Quality (ODEQ) has been the reservoir for records pertaining to septic systems that was transferred from the Department of Health. The owner of the property stated that a septic system was in place when the owner purchased the marina. He said the septic system contains three tanks. No other information was available. Central Records did not have any record of a septic system and the request was submitted to the ECLS Division to search their database,

No septic systems were identified within the subject property. Property is connected to City of Ardmore sanitary system.

A septic system was identified by the owner.

### 5.3.8 Asbestos Containing Material

Asbestos is a generic name given to a variety of fibrous minerals that have been used in commercial products. The term asbestos is a commercial designation for mineral products that possess high tensile strength, flexibility, resistance to chemical and thermal degradation, and high electrical resistance. Asbestos has been designated as a hazardous substance pursuant to CERCLA section 102 (42 U.S.C. 9602). Many building materials such as structural steel fireproofing, acoustic finishes, ceiling tile, suspended ceiling panels, textured and elastomeric paints, window putty, flexible duct connectors, rubbery pipe insulation tape, building wiring insulation, pipe, boiler, and vessel insulation, interior plaster, and duct insulation commonly contained asbestos until the late 1970s. Other types of ACM were commonly used until the middle to late 1980's such as drywall joint, compound, exterior stucco, sheet vinyl flooring, vinyl flooring products, flooring and other mastics (adhesives), roof tiles and coatings, asbestos-cement products and flues. Under the Toxic Substance Control Act (TSCA), EPA banned the use of asbestos in many products in 1993. However, several categories of building products were not subject to the ban. Thus, existing and even new buildings may lawfully contain Asbestos containing building material. The following types of building materials may still contain asbestos: vinyl-asbestos tile, roofing felt, roofing coatings, plastic roof cement, caulking putties, construction mastics, textured coatings, asbestos-cement items (shingles, corrugated sheets, flat sheets, pipes, flues), pipeline wrap and millboard.

Based on the estimated age of residential structures observed at the property, asbestos containing materials may be present. However, the future status of said buildings is unknown.

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### 5.3.9 Lead Based Paint

Lead is a soft, bluish metallic element that has been used in a wide variety of products. According to EPA, paint manufacturers frequently used lead as a primary ingredient in many oil-based interior and exterior house paints through the 1940s and gradually decreased its use in the 1950s and 1960s as latex paints became more widespread. The federal Department of Housing and Urban Development (HUD) estimated that 75 % of the houses built in the United States before 1978 contain some lead-based paint. Lead from paint, chips, and dust can pose health hazards if not properly managed. The Consumer Product Safety Commission (CPSC) prohibited use of lead in paint for residential use in 1978 in concentrations greater than 0.06 percent lead by weight. It should be noted that the use of LBP in commercial and industrial buildings and has not been prohibited. Painted surfaces on the residential structures may contain lead-based paint.

### 6.0 INTERVIEWS

#### 6.1. Current Owner

Oklahoma Department of Veterans Affairs. Onsite interview with City of Ardmore employees (name unknown) inquired about ownership and age of residential structures. No accurate information was provided. No other interviews were conducted based on the information provided on the completed questionnaire and case closure documentation relative to the reported LUST sites.

Current Owner	Approximate Period of Ownership	Approximate Time of Possession
Oklahoma Dept. Veterans Affairs	71 years	1949 - Present

#### 6.2 Past Owner

The former owner was not able to be located.

Past Owner	Approximate Period of Ownership	Approximate Time of Possession
Board of Regents of the University of Oklahoma	Prior to 1949	Unknown

### 6.3 State and Local Agency Coordination

#### Oklahoma Department of Environmental Quality

The ODEQ rely on their current databased records which are acquired by and provided through the EDR database search results. The state agencies no longer provide substantive response information regarding routine inquiries. Email inquiries typically redirect search efforts to online databases. Said databases are accessed by EDR and provided through the database search results. In the event substantive issues have been reported at a given property, those records are provided to EDR and then researched as needed and required by EEC. No such information was reported.

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## **7.0 DATA GAP AND DATA FAILURE**

A data gap is defined as a lack or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information and that the data gap impacts the environmental professional to identify recognized environmental conditions. Data gaps were encountered in association with the assessment of the property. It was not possible to confirm land use within the property for each 5-year interval of time back to 1940. However, based on the aerial photograph from 1943, the property was and has been utilized as cattle grazing and/or crop production.

Data failure is a failure to achieve the historical research objectives in Section 8 of the standard practice that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap. Data failure was not encountered during this assessment.

## **8.0 FINDINGS**

Described below are the findings obtained by the Phase 1 ESA.

There were no findings on the Environmental Database Research that required further investigation. No recognized environmental conditions were identified during this assessment.

## **9.0 OPINION**

Based on the property site visit, review of past aerial photography of the property, and an interview with the current property owner and site manager, it is the opinion of the environmental professional that this 20-acre parcel is essentially undeveloped and well-maintained. Obvious evidence of REC's was not observed at the target property. Please note, no subsurface investigation/soil sampling was conducted. No investigation to confirm asbestos containing materials was conducted.

## **10.0 CONCLUSIONS**

We have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E1527-13 on approximately 20 acres of primarily open and undeveloped property owned by the Oklahoma Department of Veterans Affairs located west of the northeast corner of Myall and Commerce Streets in Ardmore, OK.

The purpose of the Phase 1 ESA was to identify any recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment under conditions indicative of a release to the environment or under conditions that pose a material threat of a future release to the environment.

## PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

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### 11.0 REFERENCES

ASTM International. 2013. Standard Practice for Environmental Site Assessments: Phase 1 Site Assessment Process, E 1527-13. 47 pages.

Environmental Data Records, Inc. (EDR). 2020. The EDR Radius Map Report.

Environmental Data Records, Inc. (EDR). 2020. EDR Aerial Photo Decade Package.

Environmental Data Records, Inc. (EDR). 2020. Certified Sanborn Map Report.

### 12.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in 312.10 of 40 CFR 312 and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. Qualifications of the environmental professionals are provided in **Appendix F**.



March 12, 2020

Steven R. Votaw  
President



March 12, 2020

Sean Votaw  
Environmental Professional  
ASTM Certified – Phase I ESA Training

## **Appendix A**

### **Representative Photos**

Photo Location 1:



Photo Location 2:





Photo Location 3:



Photo Location 4:



Photo Location 5:



Photo Location 6:





## **Appendix B**

### **Historical Photography**



**OK State Veterans Cemetery**

Myall SW and Commerce Streets

Ardmore, OK 73401

Inquiry Number: 6002813.5

March 10, 2020

## The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

# EDR Aerial Photo Decade Package

03/10/20

**Site Name:**

OK State Veterans Cemetery  
Myall SW and Commerce Street  
Ardmore, OK 73401  
EDR Inquiry # 6002813.5

**Client Name:**

Eagle Env. Consulting Inc.  
438638 E. 220 Rd.  
Vinita, OK 74301  
Contact: Steve Votaw



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

## Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2017	1"=500'	Flight Year: 2017	USDA/NAIP
2013	1"=500'	Flight Year: 2013	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: February 21, 1995	USGS/DOQQ
1981	1"=500'	Flight Date: October 27, 1981	USDA
1970	1"=500'	Flight Date: June 24, 1970	USGS
1969	1"=1000'	Flight Date: September 29, 1969	USGS
1962	1"=500'	Flight Date: January 28, 1962	USGS
1954	1"=500'	Flight Date: November 20, 1954	USGS

**When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.**

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INQUIRY #: 6002813.5

YEAR: 2017

— = 500'





INQUIRY # 6002813.5

YEAR: 2013

— = 500'





INQUIRY #: 6002813.5

YEAR: 2010

— = 500'





INQUIRY #: 6002813.5

YEAR: 2006

— = 500'





INQUIRY #: 6002813.5

YEAR: 1995

— = 500'



Subject boundary not shown because it exceeds image extent or image is not georeferenced.



INQUIRY #: 6002813.5

YEAR: 1981

 = 500'





INQUIRY #: 6002813.5

YEAR: 1970

— = 500'





INQUIRY #: 6002813.5

YEAR: 1969

— = 1000'





INQUIRY #: 6002813.5

YEAR: 1962

— = 500'





INQUIRY #: 6002813.5

YEAR: 1954

— = 500'



## **Appendix C**

### **Sanborn Map(s)**

OK State Veterans Cemetery  
Myall SW and Commerce Streets  
Ardmore, OK 73401

Inquiry Number: 6002813.3

March 10, 2020

## Certified Sanborn® Map Report



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

# Certified Sanborn® Map Report

03/10/20

**Site Name:**

OK State Veterans Cemetery  
Myall SW and Commerce Stree  
Ardmore, OK 73401  
EDR Inquiry # 6002813.3

**Client Name:**

Eagle Env. Consulting Inc.  
438638 E. 220 Rd.  
Vinita, OK 74301  
Contact: Steve Votaw



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Eagle Env. Consulting Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting [www.edrnet.com/sanborn](http://www.edrnet.com/sanborn).

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## Certified Sanborn Results:

**Certification #** C597-4AFC-81B7  
**PO #** NA  
**Project** OK State Veterans Cemetery

### UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.



Sanborn® Library search results

Certification #: C597-4AFC-81B7

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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## **Appendix D**

### **User Inquiry Questionnaire**

## ASTM E1527-13 USER QUESTIONNAIRE

**Site Name:** State of Oklahoma Veterans Cemetery, Ardmore, OK

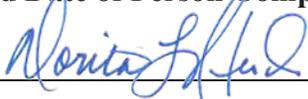
In order to qualify for one of the Landowner Liability Protections, or LLPs<sup>187</sup> offer by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (The “Brownfields Amendments”),<sup>188</sup> the user must conduct the following inquiries required by 40 CFR 312.25, 312.28, 312.29, 312.30 and 212.31. These inquiries must also be conducted by EPA Brownfield Assessment and Characterization grantees. The user should provide the following information to the environmental professional. Failure to conduct these inquiries could result in a determination that “all appropriate inquiries” is not complete.

1) Are you aware of any environmental liens against the <i>property</i> that are filed or recorded under federal, tribal, state or local law?	NONE KNOWN
2) Are you aware of any Activity and Use Limitations (AULs), such as <i>engineering controls</i> , land use restrictions or <i>institutional controls</i> that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?	NONE KNOWN
3) As the <i>user</i> of this <i>ESA</i> do you have any specialized knowledge or experience related to the <i>property</i> or nearby properties? For example, are you involved in the same line of business as the current or former <i>occupants</i> of the <i>property</i> or an adjoining <i>property</i> so that you would have specialized knowledge of the chemicals and processes used by this type of business?	NONE KNOWN
4) Does the purchase price being paid for this <i>property</i> reasonably reflect the fair market value of the <i>property</i> ? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the <i>property</i> ?	PARCEL IS UNUSED/VACANT PORTION OF ARDMORE VETERANS CENTER .
5) Are you aware of commonly known or <i>reasonably ascertainable</i> information about the <i>property</i> that would help the <i>environmental professional</i> to identify conditions indicative of releases or threatened releases? For example, as <i>user</i> ,	NONE KNOWN

(a.) Do you know the past uses of the <i>property</i> ?	NONE
(b.) Do you know of specific chemicals that are present or once were present at the <i>property</i> ?	NONE KNOWN
(c.) Do you know of spills or other chemical releases that have taken place at the <i>property</i> ?	NONE KNOWN
(d.) Do you know of any environmental cleanups that have taken place at the <i>property</i> ?	NONE KNOWN
<b>ADDITIONAL INFORMATION</b>	
Please provide any environmental reports that have been prepared concerning the property.	
Are there any water wells at the property?	NONE KNOWN
Are there or have there been underground or above ground storage tanks at the property?	NO
Provide the legal description of the property.	Working to get simple plat completed to separate parcel.
Provide the physical addresses of buildings at the property.	N/A
What is the current zoning of the property?	Public Facilities & Institutions (PFI) but will need a simple platting
What are the construction dates of all buildings at the property?	N/A. The parcel is vacant.
Do you know if there is any potable water on the property? If so, who is service provider?	CITY OF ARDMORE
Are there any municipal sanitary service connections? If so, who is this service provided by?	CITY OF ARDMORE
What is the date(s) of the sewer lines from the buildings on the property?	All Utilities will be established during the project
Are there any septic systems or lateral fields on the property? If so, please describe the location(s).	None Known
Please provide the past, previous, and current owner(s) names and periods of ownership.	Ownership of the complete parcel was transferred from Board of Regents of the University of Oklahoma to Oklahoma Veterans Commission in 1949.

Prepared By: \_\_\_\_\_

**Signature and Date of Person Completing Questionnaire**

\_\_\_\_\_  \_\_\_\_\_ Date 03/03/2020

## **Appendix E**

### **EDR Database Records/Agency Coordination/Documentation**

**OK State Veterans Cemetery**  
Myall SW and Commerce Streets  
Ardmore, OK 73401

Inquiry Number: 6002813.2s  
March 10, 2020

## The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
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***Thank you for your business.***  
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 with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### ADDRESS

MYALL SW AND COMMERCE STREETS  
ARDMORE, OK 73401

#### COORDINATES

Latitude (North): 34.1593820 - 34° 9' 33.77"  
Longitude (West): 97.1473110 - 97° 8' 50.31"  
Universal Transverse Mercator: Zone 14  
UTM X (Meters): 670786.6  
UTM Y (Meters): 3781184.0  
Elevation: 848 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 5927882 ARDMORE WEST, OK  
Version Date: 2012

### AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20150607  
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:  
 MYALL SW AND COMMERCE STREETS  
 ARDMORE, OK 73401

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
<a href="#">1</a>	DEPARTMENT OF VETERA	1015 S COMMERCE	UST, HIST UST	Higher	306, 0.058, East
<a href="#">2</a>	LASLEY ONE STOP	1136 S COMMERCE	UST, HIST UST	Higher	1309, 0.248, East
<a href="#">3</a>	GILT EDGE FARMS	1312 S COMMERCE	LUST, UST, HIST UST	Lower	1826, 0.346, SE
<a href="#">4</a>	BOB SHIREY PHILLIP 6	718 S COMMERCE	LUST, UST, HIST UST	Higher	2410, 0.456, NNE

# EXECUTIVE SUMMARY

## TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

## DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

## STANDARD ENVIRONMENTAL RECORDS

### ***Federal NPL site list***

NPL..... National Priority List  
Proposed NPL..... Proposed National Priority List Sites  
NPL LIENS..... Federal Superfund Liens

### ***Federal Delisted NPL site list***

Delisted NPL..... National Priority List Deletions

### ***Federal CERCLIS list***

FEDERAL FACILITY..... Federal Facility Site Information listing  
SEMS..... Superfund Enterprise Management System

### ***Federal CERCLIS NFRAP site list***

SEMS-ARCHIVE..... Superfund Enterprise Management System Archive

### ***Federal RCRA CORRACTS facilities list***

CORRACTS..... Corrective Action Report

### ***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

### ***Federal RCRA generators list***

RCRA-LQG..... RCRA - Large Quantity Generators  
RCRA-SQG..... RCRA - Small Quantity Generators  
RCRA-VSQG..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

### ***Federal institutional controls / engineering controls registries***

LUCIS..... Land Use Control Information System

## EXECUTIVE SUMMARY

US ENG CONTROLS..... Engineering Controls Sites List  
US INST CONTROL..... Sites with Institutional Controls

### ***Federal ERNS list***

ERNS..... Emergency Response Notification System

### ***State- and tribal - equivalent CERCLIS***

SHWS..... The Land Report

### ***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF..... Permitted Solid Waste Disposal & Processing Facilities

### ***State and tribal leaking storage tank lists***

LAST..... Leaking Aboveground Storage Tanks List  
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

### ***State and tribal registered storage tank lists***

FEMA UST..... Underground Storage Tank Listing  
AST..... Aboveground Storage Tanks  
INDIAN UST..... Underground Storage Tanks on Indian Land

### ***State and tribal institutional control / engineering control registries***

INST CONTROL..... Institutional Control Sites

### ***State and tribal voluntary cleanup sites***

VCP..... Voluntary Cleanup Site Inventory  
INDIAN VCP..... Voluntary Cleanup Priority Listing

### ***State and tribal Brownfields sites***

BROWNFIELDS..... Brownfield Sites

## **ADDITIONAL ENVIRONMENTAL RECORDS**

### ***Local Brownfield lists***

US BROWNFIELDS..... A Listing of Brownfields Sites

### ***Local Lists of Landfill / Solid Waste Disposal Sites***

SWRCY..... Recycling Facilities  
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands  
ODI..... Open Dump Inventory  
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations  
IHS OPEN DUMPS..... Open Dumps on Indian Land

### ***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL..... Delisted National Clandestine Laboratory Register

## EXECUTIVE SUMMARY

US CDL..... National Clandestine Laboratory Register

### **Local Land Records**

LIENS 2..... CERCLA Lien Information

### **Records of Emergency Release Reports**

HMIRS..... Hazardous Materials Information Reporting System

OK COMPLAINT..... Oklahoma Complaint System Database

### **Other Ascertainable Records**

RCRA NonGen / NLR..... RCRA - Non Generators / No Longer Regulated

FUDS..... Formerly Used Defense Sites

DOD..... Department of Defense Sites

SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing

US FIN ASSUR..... Financial Assurance Information

EPA WATCH LIST..... EPA WATCH LIST

2020 COR ACTION..... 2020 Corrective Action Program List

TSCA..... Toxic Substances Control Act

TRIS..... Toxic Chemical Release Inventory System

SSTS..... Section 7 Tracking Systems

ROD..... Records Of Decision

RMP..... Risk Management Plans

RAATS..... RCRA Administrative Action Tracking System

PRP..... Potentially Responsible Parties

PADS..... PCB Activity Database System

ICIS..... Integrated Compliance Information System

FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

MLTS..... Material Licensing Tracking System

COAL ASH DOE..... Steam-Electric Plant Operation Data

COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List

PCB TRANSFORMER..... PCB Transformer Registration Database

RADINFO..... Radiation Information Database

HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing

DOT OPS..... Incident and Accident Data

CONSENT..... Superfund (CERCLA) Consent Decrees

INDIAN RESERV..... Indian Reservations

FUSRAP..... Formerly Utilized Sites Remedial Action Program

UMTRA..... Uranium Mill Tailings Sites

LEAD SMELTERS..... Lead Smelter Sites

US AIRS..... Aerometric Information Retrieval System Facility Subsystem

US MINES..... Mines Master Index File

ABANDONED MINES..... Abandoned Mines

FINDS..... Facility Index System/Facility Registry System

ECHO..... Enforcement & Compliance History Information

UXO..... Unexploded Ordnance Sites

DOCKET HWC..... Hazardous Waste Compliance Docket Listing

FUELS PROGRAM..... EPA Fuels Program Registered Listing

AIRS..... Permitted AIRS Facility Listing

DRYCLEANERS..... Drycleaner Facility Listing

Financial Assurance..... Financial Assurance Information Listing

TIER 2..... Tier 2 Data Listing

# EXECUTIVE SUMMARY

UIC..... Underground Injection Wells Database Listing  
MINES MRDS..... Mineral Resources Data System

## EDR HIGH RISK HISTORICAL RECORDS

### ***EDR Exclusive Records***

EDR MGP..... EDR Proprietary Manufactured Gas Plants  
EDR Hist Auto..... EDR Exclusive Historical Auto Stations  
EDR Hist Cleaner..... EDR Exclusive Historical Cleaners

## EDR RECOVERED GOVERNMENT ARCHIVES

### ***Exclusive Recovered Govt. Archives***

RGA HWS..... Recovered Government Archive State Hazardous Waste Facilities List  
RGA LF..... Recovered Government Archive Solid Waste Facilities List  
RGA LUST..... Recovered Government Archive Leaking Underground Storage Tank

## SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

## STANDARD ENVIRONMENTAL RECORDS

### ***State and tribal leaking storage tank lists***

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Oklahoma Corporation Commission's Leaking UST list.

A review of the LUST list, as provided by EDR, and dated 12/04/2019 has revealed that there are 2 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>BOB SHIREY PHILLIP 6</i></b> STATUS: Closed Facility Id: 1007726 Close Date: 07/01/1993	<b><i>718 S COMMERCE</i></b>	<b><i>NNE 1/4 - 1/2 (0.456 mi.)</i></b>	<b><i>4</i></b>	<b><i>11</i></b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>GILT EDGE FARMS</i></b>	<b><i>1312 S COMMERCE</i></b>	<b><i>SE 1/4 - 1/2 (0.346 mi.)</i></b>	<b><i>3</i></b>	<b><i>9</i></b>

## EXECUTIVE SUMMARY

STATUS: Closed  
Facility Id: 1011969  
Close Date: 02/21/2008

### **State and tribal registered storage tank lists**

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Oklahoma Corporation Commission's State UST List, List II Version.

A review of the UST list, as provided by EDR, and dated 12/04/2019 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>DEPARTMENT OF VETERA</b> Facility Id: 1013401 TankStatus: POU	<b>1015 S COMMERCE</b>	<b>E 0 - 1/8 (0.058 mi.)</b>	<b>1</b>	<b>8</b>
<b>LASLEY ONE STOP</b> Facility Id: 1005159 TankStatus: CIU	<b>1136 S COMMERCE</b>	<b>E 1/8 - 1/4 (0.248 mi.)</b>	<b>2</b>	<b>8</b>

### **ADDITIONAL ENVIRONMENTAL RECORDS**

#### **Local Lists of Registered Storage Tanks**

HIST UST: This underground storage tank listing includes tank information through March 2003. This listing is no longer updated by the Oklahoma Corporation Commission.

A review of the HIST UST list, as provided by EDR, and dated 03/21/2003 has revealed that there are 2 HIST UST sites within approximately 0.25 miles of the target property.

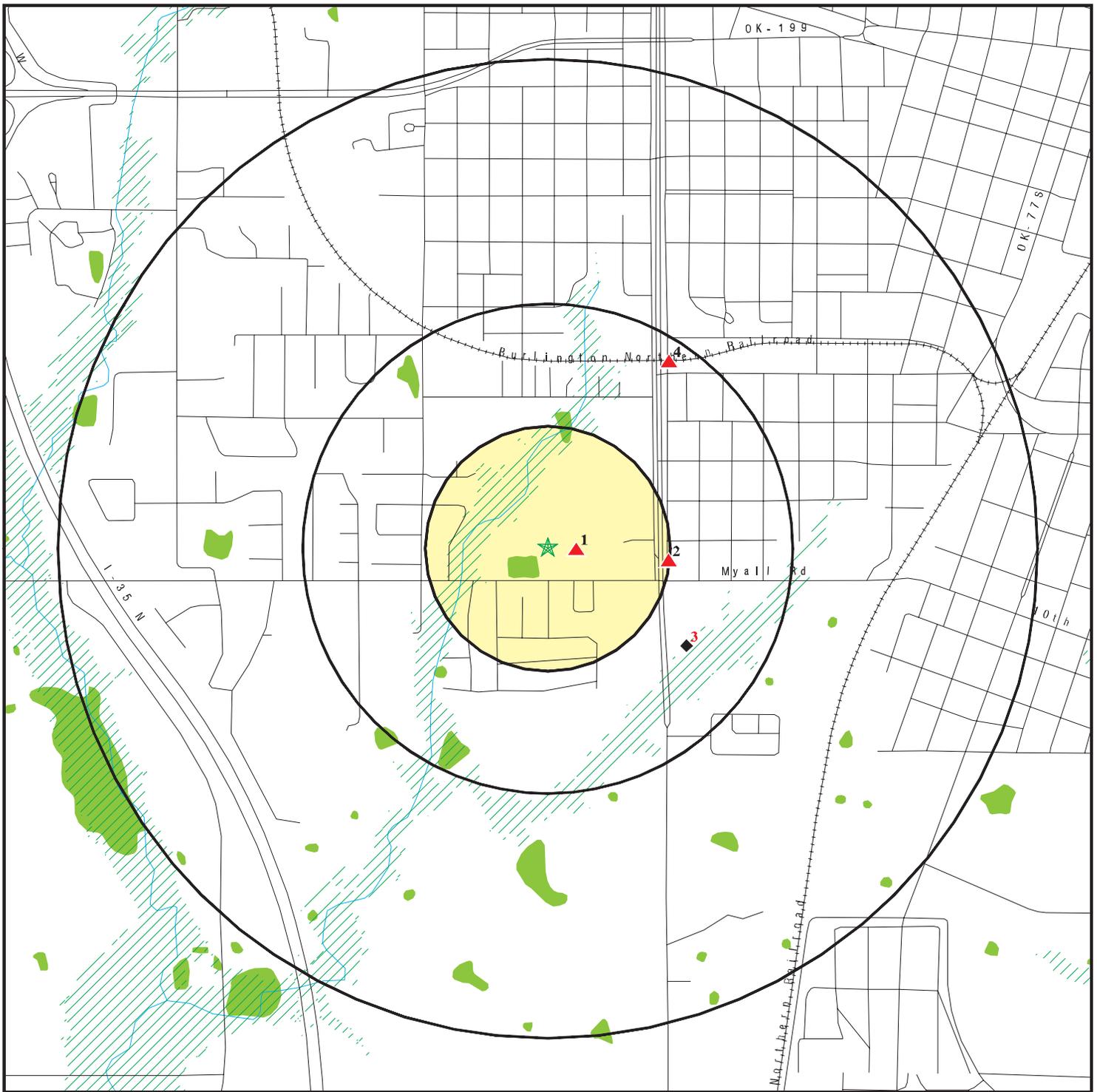
<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>DEPARTMENT OF VETERA</b> Facility Id: 1013401 Tank Status: Permanently Out of Use	<b>1015 S COMMERCE</b>	<b>E 0 - 1/8 (0.058 mi.)</b>	<b>1</b>	<b>8</b>
<b>LASLEY ONE STOP</b> Facility Id: 1005159 Tank Status: Currently in Use	<b>1136 S COMMERCE</b>	<b>E 1/8 - 1/4 (0.248 mi.)</b>	<b>2</b>	<b>8</b>

## EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

<u>Site Name</u>	<u>Database(s)</u>
CUSTOM LAND FILL SERVICE INC. LAND	SWF/LF
METROPOLITAN SOLID WASTE COMPANY	SWF/LF
VALERO REFINING COMPANY (FORMERLY	SWF/LF, Financial Assurance

# OVERVIEW MAP - 6002813.2S



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites

- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory

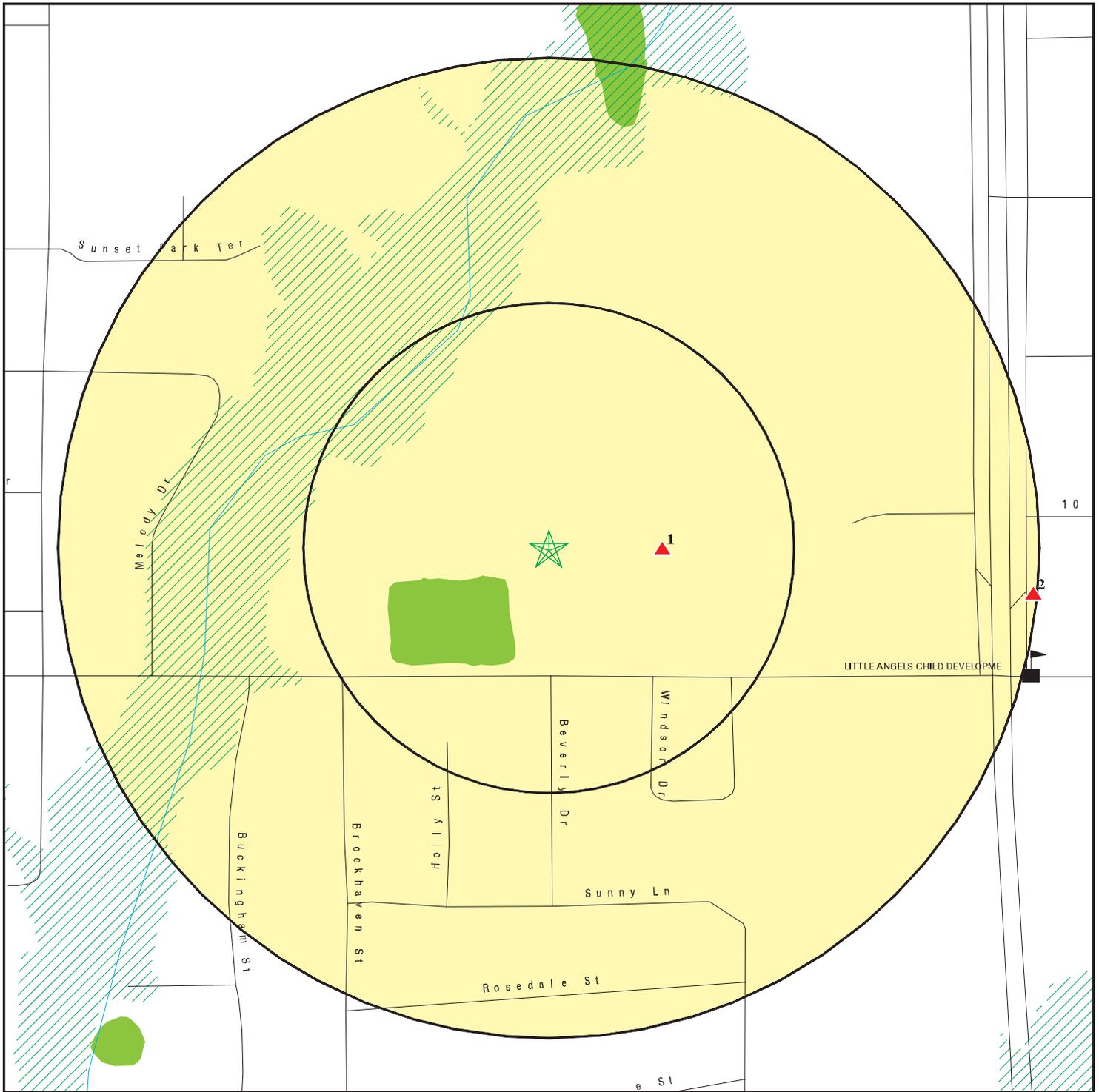


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: OK State Veterans Cemetery  
 ADDRESS: Myall SW and Commerce Streets  
 Ardmore OK 73401  
 LAT/LONG: 34.159382 / 97.147311

CLIENT: Eagle Env. Consulting Inc.  
 CONTACT: Steve Votaw  
 INQUIRY #: 6002813.2s  
 DATE: March 10, 2020 9:14 am

# DETAIL MAP - 6002813.2S



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ⚙ Manufactured Gas Plants
- ⚡ Sensitive Receptors
- 🚒 National Priority List Sites
- 🏢 Dept. Defense Sites

- Indian Reservations BIA
  - Special Flood Hazard Area (1%)
  - 0.2% Annual Chance Flood Hazard
  - National Wetland Inventory
- 0 1/16 1/8 1/4 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: OK State Veterans Cemetery  
 ADDRESS: Myall SW and Commerce Streets  
 Ardmore OK 73401  
 LAT/LONG: 34.159382 / 97.147311

CLIENT: Eagle Env. Consulting Inc.  
 CONTACT: Steve Votaw  
 INQUIRY #: 6002813.2s  
 DATE: March 10, 2020 9:14 am

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b>STANDARD ENVIRONMENTAL RECORDS</b>								
<b><i>Federal NPL site list</i></b>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<b><i>Federal Delisted NPL site list</i></b>								
Delisted NPL	1.000		0	0	0	0	NR	0
<b><i>Federal CERCLIS list</i></b>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<b><i>Federal CERCLIS NFRAP site list</i></b>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<b><i>Federal RCRA CORRACTS facilities list</i></b>								
CORRACTS	1.000		0	0	0	0	NR	0
<b><i>Federal RCRA non-CORRACTS TSD facilities list</i></b>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<b><i>Federal RCRA generators list</i></b>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<b><i>Federal institutional controls / engineering controls registries</i></b>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
<b><i>Federal ERNS list</i></b>								
ERNS	TP		NR	NR	NR	NR	NR	0
<b><i>State- and tribal - equivalent CERCLIS</i></b>								
SHWS	1.000		0	0	0	0	NR	0
<b><i>State and tribal landfill and/or solid waste disposal site lists</i></b>								
SWF/LF	0.500		0	0	0	NR	NR	0
<b><i>State and tribal leaking storage tank lists</i></b>								
LUST	0.500		0	0	2	NR	NR	2
LAST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
<b><i>State and tribal registered storage tank lists</i></b>								
FEMA UST	0.250		0	0	NR	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST	0.250		1	1	NR	NR	NR	2
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<b><i>State and tribal institutional control / engineering control registries</i></b>								
INST CONTROL	0.500		0	0	0	NR	NR	0
<b><i>State and tribal voluntary cleanup sites</i></b>								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
<b><i>State and tribal Brownfields sites</i></b>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<b><u>ADDITIONAL ENVIRONMENTAL RECORDS</u></b>								
<b><i>Local Brownfield lists</i></b>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<b><i>Local Lists of Landfill / Solid Waste Disposal Sites</i></b>								
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<b><i>Local Lists of Hazardous waste / Contaminated Sites</i></b>								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
<b><i>Local Lists of Registered Storage Tanks</i></b>								
HIST UST	0.250		1	1	NR	NR	NR	2
<b><i>Local Land Records</i></b>								
LIENS 2	TP		NR	NR	NR	NR	NR	0
<b><i>Records of Emergency Release Reports</i></b>								
HMIRS	TP		NR	NR	NR	NR	NR	0
OK COMPLAINT	TP		NR	NR	NR	NR	NR	0
<b><i>Other Ascertainable Records</i></b>								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0

### EDR HIGH RISK HISTORICAL RECORDS

#### ***EDR Exclusive Records***

EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0

### EDR RECOVERED GOVERNMENT ARCHIVES

#### ***Exclusive Recovered Govt. Archives***

RGA HWS	TP		NR	NR	NR	NR	NR	0
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## MAP FINDINGS SUMMARY

<u>Database</u>	<u>Search Distance (Miles)</u>	<u>Target Property</u>	<u>&lt; 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt; 1</u>	<u>Total Plotted</u>
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	2	2	2	0	0	6

**NOTES:**

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Site

Database(s)

EDR ID Number  
 EPA ID Number

**1**  
**East**  
**< 1/8**  
**0.058 mi.**  
**306 ft.**

**DEPARTMENT OF VETERANS AFFAIRS**  
**1015 S COMMERCE**  
**ARDMORE, OK 73401**

**UST U001887173**  
**HIST UST N/A**

**Relative:**  
**Higher**  
**Actual:**  
**855 ft.**

UST:  
 Facility ID: 1013401  
 Contact Name: Okla. Dept. Of Veterans Affairs  
 Contact Address: PO Box 53067  
 Contact Telephone: 4055220047  
 Contact City,St,Zip: Oklahoma City, OK 73152  
 Lat/Long: 34.1614 / -97.1428

Tank ID: 1  
 Tank Status: Permanently Out Of Use  
 Total Capacity: 3000  
 Substance: Gasoline  
 Date Installed: Not reported  
 Tank Type: UST  
 Closed Date: 03/09/1994  
 Decode of Tank Status: Permanently out of use  
 Closure Status: Tank Removed From Ground  
 Tank Construction: Single Walled  
 Tank Material: Steel  
 Pipe Construction: Single-Walled  
 Pipe Material: Steel

HIST UST:  
 Facility ID: 1013401  
 Owner Name: OKLA. DEPT. OF VETERANS AFFAIRS  
 Owner Address: PO BOX 53067 2311 N CENTRAL  
 Owner City,St,Zip: Oklahoma City, OK 73152  
 Tank ID: 1  
 Tank Status: Permanently Out of Use  
 Installed Date: Not reported  
 Tank Capacity: 3000  
 Product: Gasoline

**2**  
**East**  
**1/8-1/4**  
**0.248 mi.**  
**1309 ft.**

**LASLEY ONE STOP**  
**1136 S COMMERCE**  
**ARDMORE, OK 73401**

**UST U001224048**  
**HIST UST N/A**

**Relative:**  
**Higher**  
**Actual:**  
**861 ft.**

UST:  
 Facility ID: 1005159  
 Contact Name: Convenient Foods, Inc.  
 Contact Address: 1136 South Commerce  
 Contact Telephone: 5802213471  
 Contact City,St,Zip: Ardmore, OK 73401  
 Lat/Long: 34.1582 / -97.1429

Tank ID: 1  
 Tank Status: Currently In Use  
 Total Capacity: 6000  
 Substance: E-10  
 Date Installed: 05/01/1979  
 Tank Type: UST  
 Closed Date: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**LASLEY ONE STOP (Continued)**

**U001224048**

Decode of Tank Status: Currently in use  
Closure Status: Not reported  
Tank Construction: Single Walled  
Tank Material: Steel  
Pipe Construction: Single-Walled  
Pipe Material: Steel

Tank ID: 2  
Tank Status: Currently In Use  
Total Capacity: 8000  
Substance: E-10  
Date Installed: 05/01/1979  
Tank Type: UST  
Closed Date: Not reported  
Decode of Tank Status: Currently in use  
Closure Status: Not reported  
Tank Construction: Single Walled  
Tank Material: Steel  
Pipe Construction: Single-Walled  
Pipe Material: Steel

**HIST UST:**

Facility ID: 1005159  
Owner Name: Campbell Oil Co.  
Owner Address: P. O. Box 698  
Owner City,St,Zip: Ardmore, OK 73402  
Tank ID: 1  
Tank Status: Currently in Use  
Installed Date: 5/1/1979 0:00:00  
Tank Capacity: 6000  
Product: Gasoline

Facility ID: 1005159  
Owner Name: Campbell Oil Co.  
Owner Address: P. O. Box 698  
Owner City,St,Zip: Ardmore, OK 73402  
Tank ID: 2  
Tank Status: Currently in Use  
Installed Date: 5/1/1979 0:00:00  
Tank Capacity: 8000  
Product: Gasoline

**3**  
**SE**  
**1/4-1/2**  
**0.346 mi.**  
**1826 ft.**

**GILT EDGE FARMS**  
**1312 S COMMERCE**  
**ARDMORE, OK 73401**

**LUST** **U001881910**  
**UST** **N/A**  
**HIST UST**

**Relative:**  
**Lower**  
**Actual:**  
**842 ft.**

**LUST:**  
Name: GILT EDGE FARMS  
Address: 1312 S COMMERCE  
City,State,Zip: ARDMORE, OK 73401  
Facility ID: 1011969  
Case Number: 064-2480  
Case Type: Confirmed Release  
**Tank Type: UST**  
**Release Date: 03/30/2001**  
**Close Date: 02/21/2008**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**GILT EDGE FARMS (Continued)**

**U001881910**

Lat/Long: 34.1565 / -97.1424  
Status: **Closed**

UST:

Facility ID: 1011969  
Contact Name: Gus Hendrix Oil Co Inc  
Contact Address: 711 MOORE SW, PO BOX 1808  
Contact Telephone: 4052230638  
Contact City,St,Zip: Ardmore, OK 73402  
Lat/Long: 34.1565 / -97.1424

Tank ID: 1  
Tank Status: Permanently Out Of Use  
Total Capacity: 2000  
Substance: Diesel  
Date Installed: 01/01/1985  
Tank Type: UST  
Closed Date: 07/26/1999  
Decode of Tank Status: Permanently out of use  
Closure Status: Tank Removed From Ground  
Tank Construction: Single Walled  
Tank Material: Steel  
Pipe Construction: Single-Walled  
Pipe Material: Steel

Tank ID: 2  
Tank Status: Permanently Out Of Use  
Total Capacity: 2000  
Substance: Diesel  
Date Installed: 01/01/1985  
Tank Type: UST  
Closed Date: 07/26/1999  
Decode of Tank Status: Permanently out of use  
Closure Status: Tank Removed From Ground  
Tank Construction: Single Walled  
Tank Material: Steel  
Pipe Construction: Single-Walled  
Pipe Material: Steel

HIST UST:

Facility ID: 1011969  
Owner Name: GUS HENDRIX OIL CO INC  
Owner Address: 711 MOORE SW, PO BOX 1808  
Owner City,St,Zip: Ardmore, OK 73402  
Tank ID: 1  
Tank Status: Permanently Out of Use  
Installed Date: 1/1/1985 0:00:00  
Tank Capacity: 2000  
Product: Diesel

Facility ID: 1011969  
Owner Name: GUS HENDRIX OIL CO INC  
Owner Address: 711 MOORE SW, PO BOX 1808  
Owner City,St,Zip: Ardmore, OK 73402  
Tank ID: 2  
Tank Status: Permanently Out of Use  
Installed Date: 1/1/1985 0:00:00

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**GILT EDGE FARMS (Continued)**

**U001881910**

Tank Capacity: 2000  
Product: Diesel

**4**  
**NNE**  
**1/4-1/2**  
**0.456 mi.**  
**2410 ft.**

**BOB SHIREY PHILLIP 66**  
**718 S COMMERCE**  
**ARDMORE, OK 73401**

**LUST** **U001224123**  
**UST** **N/A**  
**HIST UST**

**Relative:**  
**Higher**  
**Actual:**  
**867 ft.**

**LUST:**  
Name: BOB SHIREY PHILLIP 66  
Address: 718 S COMMERCE  
City,State,Zip: ARDMORE, OK 73401  
Facility ID: 1007726  
Case Number: 064-0491  
Case Type: Confirmed Release  
**Tank Type: UST**  
**Release Date: 04/17/1992**  
**Close Date: 07/01/1993**  
Lat/Long: 34.1645 / -97.1428  
**Status: Closed**

**UST:**  
Facility ID: 1007726  
Contact Name: Bob Shirey Phillip 66  
Contact Address: 718 S COMMERCE  
Contact Telephone: 4052239226  
Contact City,St,Zip: Ardmore, OK 73401  
Lat/Long: 34.1645 / -97.1428  
  
Tank ID: 1  
Tank Status: Permanently Out Of Use  
Total Capacity: 2000  
Substance: Gasoline  
Date Installed: 05/03/1981  
Tank Type: UST  
Closed Date: 03/05/1999  
Decode of Tank Status: Permanently out of use  
Closure Status: Tank Removed From Ground  
Tank Construction: Single Walled  
Tank Material: Steel  
Pipe Construction: Single-Walled  
Pipe Material: Steel  
  
Tank ID: 2  
Tank Status: Permanently Out Of Use  
Total Capacity: 4000  
Substance: Gasoline  
Date Installed: 05/03/1981  
Tank Type: UST  
Closed Date: 03/05/1999  
Decode of Tank Status: Permanently out of use  
Closure Status: Tank Removed From Ground  
Tank Construction: Single Walled  
Tank Material: Steel  
Pipe Construction: Single-Walled  
Pipe Material: Steel

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BOB SHIREY PHILLIP 66 (Continued)**

**U001224123**

Tank ID: 3  
Tank Status: Permanently Out Of Use  
Total Capacity: 1000  
Substance: Used Oil  
Date Installed: 05/03/1981  
Tank Type: UST  
Closed Date: 03/05/1999  
Decode of Tank Status: Permanently out of use  
Closure Status: Tank Removed From Ground  
Tank Construction: Single Walled  
Tank Material: Steel  
Pipe Construction: Single-Walled  
Pipe Material: Steel

Tank ID: 4  
Tank Status: Permanently Out Of Use  
Total Capacity: 1000  
Substance: Diesel  
Date Installed: 05/03/1981  
Tank Type: UST  
Closed Date: 03/05/1999  
Decode of Tank Status: Permanently out of use  
Closure Status: Tank Removed From Ground  
Tank Construction: Single Walled  
Tank Material: Steel  
Pipe Construction: Single-Walled  
Pipe Material: Steel

**HIST UST:**

Facility ID: 1007726  
Owner Name: BOB SHIREY PHILLIP 66  
Owner Address: 718 S COMMERCE  
Owner City,St,Zip: Ardmore, OK 73401  
Tank ID: 1  
Tank Status: Permanently Out of Use  
Installed Date: 5/3/1981 0:00:00  
Tank Capacity: 2000  
Product: Gasoline

Facility ID: 1007726  
Owner Name: BOB SHIREY PHILLIP 66  
Owner Address: 718 S COMMERCE  
Owner City,St,Zip: Ardmore, OK 73401  
Tank ID: 2  
Tank Status: Permanently Out of Use  
Installed Date: 5/3/1981 0:00:00  
Tank Capacity: 4000  
Product: Gasoline

Facility ID: 1007726  
Owner Name: BOB SHIREY PHILLIP 66  
Owner Address: 718 S COMMERCE  
Owner City,St,Zip: Ardmore, OK 73401  
Tank ID: 3  
Tank Status: Permanently Out of Use  
Installed Date: 5/3/1981 0:00:00  
Tank Capacity: 1000  
Product: Used Oil

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BOB SHIREY PHILLIP 66 (Continued)**

**U001224123**

Facility ID: 1007726  
Owner Name: BOB SHIREY PHILLIP 66  
Owner Address: 718 S COMMERCE  
Owner City,St,Zip: Ardmore, OK 73401  
Tank ID: 4  
Tank Status: Permanently Out of Use  
Installed Date: 5/3/1981 0:00:00  
Tank Capacity: 1000  
Product: Diesel

Count: 3 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CARTER COUNTY	S106496440	CUSTOM LAND FILL SERVICE INC. LAND	SW/4 OF S3 & N/2 N/2 NW/4 NW/4		SWF/LF
CARTER COUNTY	S106496433	METROPOLITAN SOLID WASTE COMPANY	N/2 SE/4 NE/4 & NE/4 NE/4 OF S		SWF/LF
CARTER COUNTY	S106496439	VALERO REFINING COMPANY (FORMERLY	N/2 SW/4 NW/4 OF S16 T4S R2E		SWF/LF, Financial Assurance

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

## **STANDARD ENVIRONMENTAL RECORDS**

### ***Federal NPL site list***

#### **NPL: National Priority List**

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/30/2020	Source: EPA
Date Data Arrived at EDR: 02/05/2020	Telephone: N/A
Date Made Active in Reports: 02/14/2020	Last EDR Contact: 03/04/2020
Number of Days to Update: 9	Next Scheduled EDR Contact: 04/13/2020
	Data Release Frequency: Quarterly

#### **NPL Site Boundaries**

##### **Sources:**

EPA's Environmental Photographic Interpretation Center (EPIC)  
Telephone: 202-564-7333

EPA Region 1  
Telephone 617-918-1143

EPA Region 6  
Telephone: 214-655-6659

EPA Region 3  
Telephone 215-814-5418

EPA Region 7  
Telephone: 913-551-7247

EPA Region 4  
Telephone 404-562-8033

EPA Region 8  
Telephone: 303-312-6774

EPA Region 5  
Telephone 312-886-6686

EPA Region 9  
Telephone: 415-947-4246

EPA Region 10  
Telephone 206-553-8665

#### **Proposed NPL: Proposed National Priority List Sites**

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 01/30/2020	Source: EPA
Date Data Arrived at EDR: 02/05/2020	Telephone: N/A
Date Made Active in Reports: 02/14/2020	Last EDR Contact: 03/04/2020
Number of Days to Update: 9	Next Scheduled EDR Contact: 04/13/2020
	Data Release Frequency: Quarterly

#### **NPL LIENS: Federal Superfund Liens**

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/1991  
Date Data Arrived at EDR: 02/02/1994  
Date Made Active in Reports: 03/30/1994  
Number of Days to Update: 56

Source: EPA  
Telephone: 202-564-4267  
Last EDR Contact: 08/15/2011  
Next Scheduled EDR Contact: 11/28/2011  
Data Release Frequency: No Update Planned

## ***Federal Delisted NPL site list***

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/30/2020  
Date Data Arrived at EDR: 02/05/2020  
Date Made Active in Reports: 02/14/2020  
Number of Days to Update: 9

Source: EPA  
Telephone: N/A  
Last EDR Contact: 03/04/2020  
Next Scheduled EDR Contact: 04/13/2020  
Data Release Frequency: Quarterly

## ***Federal CERCLIS list***

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019  
Date Data Arrived at EDR: 04/05/2019  
Date Made Active in Reports: 05/14/2019  
Number of Days to Update: 39

Source: Environmental Protection Agency  
Telephone: 703-603-8704  
Last EDR Contact: 01/03/2020  
Next Scheduled EDR Contact: 04/13/2020  
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/30/2020  
Date Data Arrived at EDR: 02/05/2020  
Date Made Active in Reports: 02/14/2020  
Number of Days to Update: 9

Source: EPA  
Telephone: 800-424-9346  
Last EDR Contact: 02/05/2020  
Next Scheduled EDR Contact: 04/27/2020  
Data Release Frequency: Quarterly

## ***Federal CERCLIS NFRAP site list***

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/30/2020	Source: EPA
Date Data Arrived at EDR: 02/05/2020	Telephone: 800-424-9346
Date Made Active in Reports: 02/14/2020	Last EDR Contact: 03/04/2020
Number of Days to Update: 9	Next Scheduled EDR Contact: 04/27/2020
	Data Release Frequency: Quarterly

## ***Federal RCRA CORRACTS facilities list***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/16/2019	Source: EPA
Date Data Arrived at EDR: 12/16/2019	Telephone: 800-424-9346
Date Made Active in Reports: 12/20/2019	Last EDR Contact: 02/27/2020
Number of Days to Update: 4	Next Scheduled EDR Contact: 04/06/2020
	Data Release Frequency: Quarterly

## ***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/16/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/16/2019	Telephone: 214-665-6444
Date Made Active in Reports: 12/20/2019	Last EDR Contact: 02/27/2020
Number of Days to Update: 4	Next Scheduled EDR Contact: 04/06/2020
	Data Release Frequency: Quarterly

## ***Federal RCRA generators list***

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/16/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/16/2019	Telephone: 214-665-6444
Date Made Active in Reports: 12/20/2019	Last EDR Contact: 02/27/2020
Number of Days to Update: 4	Next Scheduled EDR Contact: 04/06/2020
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/16/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/16/2019	Telephone: 214-665-6444
Date Made Active in Reports: 12/20/2019	Last EDR Contact: 02/27/2020
Number of Days to Update: 4	Next Scheduled EDR Contact: 04/06/2020
	Data Release Frequency: Quarterly

## RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/16/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/16/2019	Telephone: 214-665-6444
Date Made Active in Reports: 12/20/2019	Last EDR Contact: 02/27/2020
Number of Days to Update: 4	Next Scheduled EDR Contact: 04/06/2020
	Data Release Frequency: Quarterly

## ***Federal institutional controls / engineering controls registries***

### LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/04/2019	Source: Department of the Navy
Date Data Arrived at EDR: 11/13/2019	Telephone: 843-820-7326
Date Made Active in Reports: 01/28/2020	Last EDR Contact: 02/10/2020
Number of Days to Update: 76	Next Scheduled EDR Contact: 05/25/2020
	Data Release Frequency: Varies

### US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 11/22/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/22/2019	Telephone: 703-603-0695
Date Made Active in Reports: 01/28/2020	Last EDR Contact: 02/20/2020
Number of Days to Update: 67	Next Scheduled EDR Contact: 06/08/2020
	Data Release Frequency: Varies

### US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 11/22/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/22/2019	Telephone: 703-603-0695
Date Made Active in Reports: 01/28/2020	Last EDR Contact: 02/20/2020
Number of Days to Update: 67	Next Scheduled EDR Contact: 06/08/2020
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## **Federal ERNS list**

### ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/16/2019  
Date Data Arrived at EDR: 12/19/2019  
Date Made Active in Reports: 03/06/2020  
Number of Days to Update: 78

Source: National Response Center, United States Coast Guard  
Telephone: 202-267-2180  
Last EDR Contact: 12/19/2019  
Next Scheduled EDR Contact: 04/06/2020  
Data Release Frequency: Quarterly

## **State- and tribal - equivalent CERCLIS**

### SHWS: Voluntary Cleanup & Superfund Site Status Report

Land restoration projects carried out in several DEQ programs.

Date of Government Version: 12/31/2009  
Date Data Arrived at EDR: 05/28/2010  
Date Made Active in Reports: 07/13/2010  
Number of Days to Update: 46

Source: Department of Environmental Quality  
Telephone: 405-702-5100  
Last EDR Contact: 02/10/2020  
Next Scheduled EDR Contact: 05/25/2020  
Data Release Frequency: Varies

## **State and tribal landfill and/or solid waste disposal site lists**

### SWF/LF: Permitted Solid Waste Disposal & Processing Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 01/29/2019  
Date Data Arrived at EDR: 11/01/2019  
Date Made Active in Reports: 12/11/2019  
Number of Days to Update: 40

Source: Department of Environmental Quality  
Telephone: 405-702-5184  
Last EDR Contact: 01/31/2020  
Next Scheduled EDR Contact: 05/11/2020  
Data Release Frequency: Annually

## **State and tribal leaking storage tank lists**

### LAST: Leaking Aboveground Storage Tanks List

Leaking aboveground storage tank site locations.

Date of Government Version: 12/04/2019  
Date Data Arrived at EDR: 12/19/2019  
Date Made Active in Reports: 03/03/2020  
Number of Days to Update: 75

Source: Oklahoma Corporation Commission  
Telephone: 405-522-4640  
Last EDR Contact: 12/19/2019  
Next Scheduled EDR Contact: 04/06/2020  
Data Release Frequency: Varies

### LUST: Leaking Underground Storage Tank List

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 12/04/2019  
Date Data Arrived at EDR: 12/19/2019  
Date Made Active in Reports: 03/03/2020  
Number of Days to Update: 75

Source: Oklahoma Corporation Commission  
Telephone: 405-521-3107  
Last EDR Contact: 12/19/2019  
Next Scheduled EDR Contact: 04/06/2020  
Data Release Frequency: Varies

### INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/04/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/04/2019	Telephone: 415-972-3372
Date Made Active in Reports: 02/27/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 85	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/10/2019	Source: EPA Region 4
Date Data Arrived at EDR: 12/05/2019	Telephone: 404-562-8677
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 67	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land  
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2019	Source: EPA Region 1
Date Data Arrived at EDR: 12/04/2019	Telephone: 617-918-1313
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/02/2019	Source: EPA Region 6
Date Data Arrived at EDR: 12/04/2019	Telephone: 214-665-6597
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/11/2019	Source: EPA Region 10
Date Data Arrived at EDR: 12/04/2019	Telephone: 206-553-2857
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/03/2019	Source: EPA Region 8
Date Data Arrived at EDR: 12/04/2019	Telephone: 303-312-6271
Date Made Active in Reports: 02/14/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 72	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/15/2019	Source: EPA Region 7
Date Data Arrived at EDR: 12/17/2019	Telephone: 913-551-7003
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 12/16/2019
Number of Days to Update: 55	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/01/2019	Source: EPA, Region 5
Date Data Arrived at EDR: 12/04/2019	Telephone: 312-886-7439
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

### **State and tribal registered storage tank lists**

#### FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 08/27/2019	Source: FEMA
Date Data Arrived at EDR: 08/28/2019	Telephone: 202-646-5797
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 01/21/2020
Number of Days to Update: 75	Next Scheduled EDR Contact: 04/20/2020
	Data Release Frequency: Varies

#### UST: Underground Storage Tank Listing

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 12/04/2019	Source: Oklahoma Corporation Commission
Date Data Arrived at EDR: 12/19/2019	Telephone: 405-521-3107
Date Made Active in Reports: 03/03/2020	Last EDR Contact: 12/19/2019
Number of Days to Update: 75	Next Scheduled EDR Contact: 04/06/2020
	Data Release Frequency: Varies

#### AST: Aboveground Storage Tanks

Registered Aboveground Storage Tanks.

Date of Government Version: 12/04/2019	Source: Oklahoma Corporation Commission
Date Data Arrived at EDR: 12/19/2019	Telephone: 405-521-3107
Date Made Active in Reports: 03/03/2020	Last EDR Contact: 12/19/2019
Number of Days to Update: 75	Next Scheduled EDR Contact: 04/06/2020
	Data Release Frequency: Varies

#### INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/02/2019	Source: EPA Region 6
Date Data Arrived at EDR: 12/04/2019	Telephone: 214-665-7591
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

#### INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/01/2019	Source: EPA Region 5
Date Data Arrived at EDR: 12/04/2019	Telephone: 312-886-6136
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/04/2019	Source: EPA Region 9
Date Data Arrived at EDR: 12/04/2019	Telephone: 415-972-3368
Date Made Active in Reports: 02/27/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 85	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

## INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2019	Source: EPA, Region 1
Date Data Arrived at EDR: 12/04/2019	Telephone: 617-918-1313
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

## INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/11/2019	Source: EPA Region 10
Date Data Arrived at EDR: 12/04/2019	Telephone: 206-553-2857
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

## INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/10/2019	Source: EPA Region 4
Date Data Arrived at EDR: 12/05/2019	Telephone: 404-562-9424
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 67	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

## INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/03/2019	Source: EPA Region 8
Date Data Arrived at EDR: 12/04/2019	Telephone: 303-312-6137
Date Made Active in Reports: 02/14/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 72	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

## INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/11/2019	Source: EPA Region 7
Date Data Arrived at EDR: 12/04/2019	Telephone: 913-551-7003
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 68	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ***State and tribal institutional control / engineering control registries***

INST CONTROL: Institutional Control Sites  
Sites with institutional controls in place.

Date of Government Version: 11/07/2019  
Date Data Arrived at EDR: 11/20/2019  
Date Made Active in Reports: 01/28/2020  
Number of Days to Update: 69

Source: Department of Environmental Quality  
Telephone: 405-702-5100  
Last EDR Contact: 02/12/2020  
Next Scheduled EDR Contact: 05/25/2020  
Data Release Frequency: Quarterly

## ***State and tribal voluntary cleanup sites***

VCP: Voluntary Cleanup Site Inventory

Investigations and cleanups by groups or individuals participating in the Voluntary Cleanup Program (VCP).

Date of Government Version: 11/07/2019  
Date Data Arrived at EDR: 11/20/2019  
Date Made Active in Reports: 01/28/2020  
Number of Days to Update: 69

Source: Department of Environmental Quality  
Telephone: 405-702-5100  
Last EDR Contact: 02/12/2020  
Next Scheduled EDR Contact: 05/25/2020  
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015  
Date Data Arrived at EDR: 09/29/2015  
Date Made Active in Reports: 02/18/2016  
Number of Days to Update: 142

Source: EPA, Region 1  
Telephone: 617-918-1102  
Last EDR Contact: 12/17/2019  
Next Scheduled EDR Contact: 04/06/2020  
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008  
Date Data Arrived at EDR: 04/22/2008  
Date Made Active in Reports: 05/19/2008  
Number of Days to Update: 27

Source: EPA, Region 7  
Telephone: 913-551-7365  
Last EDR Contact: 04/20/2009  
Next Scheduled EDR Contact: 07/20/2009  
Data Release Frequency: Varies

## ***State and tribal Brownfields sites***

BROWNFIELDS: Brownfield Sites

Brownfields are defined by Oklahoma law as abandoned, idled or under used industrial or commercial facilities or other real property at which expansion or redevelopment of the real property is complicated by environmental contamination caused by regulated substances. This program provides a means for private parties and government entities to voluntarily investigate and if warranted, clean up properties that may be contaminated with hazardous wastes. The formal Brownfields Program provides specific state liability relief and protects the property from federal Superfund actions.

Date of Government Version: 09/07/2012  
Date Data Arrived at EDR: 09/07/2012  
Date Made Active in Reports: 10/10/2012  
Number of Days to Update: 33

Source: Department of Environmental Quality  
Telephone: 405-702-5100  
Last EDR Contact: 02/10/2020  
Next Scheduled EDR Contact: 05/25/2020  
Data Release Frequency: No Update Planned

BROWNFIELDS 2: Brownfields Public Record Listing

The Brownfields program provides a means for private parties and government entities to voluntarily investigate and if warranted, clean up properties that may be contaminated with hazardous wastes. The formal Brownfields Program provides specific state liability relief and protects the property from federal Superfund actions.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/29/2019  
Date Data Arrived at EDR: 12/02/2019  
Date Made Active in Reports: 02/05/2020  
Number of Days to Update: 65

Source: Department of Environmental Quality  
Telephone: 405-702-5100  
Last EDR Contact: 02/10/2020  
Next Scheduled EDR Contact: 05/25/2020  
Data Release Frequency: Varies

## **ADDITIONAL ENVIRONMENTAL RECORDS**

### ***Local Brownfield lists***

#### **US BROWNFIELDS: A Listing of Brownfields Sites**

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/02/2019  
Date Data Arrived at EDR: 12/16/2019  
Date Made Active in Reports: 03/06/2020  
Number of Days to Update: 81

Source: Environmental Protection Agency  
Telephone: 202-566-2777  
Last EDR Contact: 12/16/2019  
Next Scheduled EDR Contact: 03/30/2020  
Data Release Frequency: Semi-Annually

### ***Local Lists of Landfill / Solid Waste Disposal Sites***

#### **SWRCY: Recycling Facilities**

A listing of recycling facility locations.

Date of Government Version: 07/10/2019  
Date Data Arrived at EDR: 07/17/2019  
Date Made Active in Reports: 08/29/2019  
Number of Days to Update: 43

Source: Department of Environmental Quality  
Telephone: 405-702-5100  
Last EDR Contact: 01/17/2020  
Next Scheduled EDR Contact: 04/27/2020  
Data Release Frequency: Varies

#### **INDIAN ODI: Report on the Status of Open Dumps on Indian Lands**

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998  
Date Data Arrived at EDR: 12/03/2007  
Date Made Active in Reports: 01/24/2008  
Number of Days to Update: 52

Source: Environmental Protection Agency  
Telephone: 703-308-8245  
Last EDR Contact: 01/27/2020  
Next Scheduled EDR Contact: 05/11/2020  
Data Release Frequency: Varies

#### **DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations**

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009  
Date Data Arrived at EDR: 05/07/2009  
Date Made Active in Reports: 09/21/2009  
Number of Days to Update: 137

Source: EPA, Region 9  
Telephone: 415-947-4219  
Last EDR Contact: 01/17/2020  
Next Scheduled EDR Contact: 05/04/2020  
Data Release Frequency: No Update Planned

#### **ODI: Open Dump Inventory**

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/30/1985  
Date Data Arrived at EDR: 08/09/2004  
Date Made Active in Reports: 09/17/2004  
Number of Days to Update: 39

Source: Environmental Protection Agency  
Telephone: 800-424-9346  
Last EDR Contact: 06/09/2004  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

## IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014  
Date Data Arrived at EDR: 08/06/2014  
Date Made Active in Reports: 01/29/2015  
Number of Days to Update: 176

Source: Department of Health & Human Services, Indian Health Service  
Telephone: 301-443-1452  
Last EDR Contact: 01/31/2020  
Next Scheduled EDR Contact: 05/11/2020  
Data Release Frequency: Varies

## **Local Lists of Hazardous waste / Contaminated Sites**

### US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 06/11/2019  
Date Data Arrived at EDR: 06/13/2019  
Date Made Active in Reports: 09/03/2019  
Number of Days to Update: 82

Source: Drug Enforcement Administration  
Telephone: 202-307-1000  
Last EDR Contact: 02/21/2020  
Next Scheduled EDR Contact: 06/08/2020  
Data Release Frequency: No Update Planned

### US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/11/2019  
Date Data Arrived at EDR: 06/13/2019  
Date Made Active in Reports: 09/03/2019  
Number of Days to Update: 82

Source: Drug Enforcement Administration  
Telephone: 202-307-1000  
Last EDR Contact: 02/21/2020  
Next Scheduled EDR Contact: 06/08/2020  
Data Release Frequency: Quarterly

## **Local Lists of Registered Storage Tanks**

### HIST UST: Underground Storage Tank List, List II Version

This underground storage tank listing includes tank information through March 2003. This listing is no longer updated by the Oklahoma Corporation Commission.

Date of Government Version: 03/21/2003  
Date Data Arrived at EDR: 04/28/2003  
Date Made Active in Reports: 05/27/2003  
Number of Days to Update: 29

Source: Oklahoma Corporation Commission  
Telephone: 405-521-3107  
Last EDR Contact: 01/19/2009  
Next Scheduled EDR Contact: 04/19/2009  
Data Release Frequency: No Update Planned

## **Local Land Records**

### LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 01/30/2020  
Date Data Arrived at EDR: 02/05/2020  
Date Made Active in Reports: 02/14/2020  
Number of Days to Update: 9

Source: Environmental Protection Agency  
Telephone: 202-564-6023  
Last EDR Contact: 03/05/2020  
Next Scheduled EDR Contact: 04/13/2020  
Data Release Frequency: Semi-Annually

## **Records of Emergency Release Reports**

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/05/2019  
Date Data Arrived at EDR: 12/06/2019  
Date Made Active in Reports: 02/14/2020  
Number of Days to Update: 70

Source: U.S. Department of Transportation  
Telephone: 202-366-4555  
Last EDR Contact: 12/06/2019  
Next Scheduled EDR Contact: 04/06/2020  
Data Release Frequency: Quarterly

OK COMPLAINT: Oklahoma Complaint System Database

Environmental complaints reported to the Oklahoma Corporation Commission.

Date of Government Version: 06/30/2018  
Date Data Arrived at EDR: 06/11/2019  
Date Made Active in Reports: 06/17/2019  
Number of Days to Update: 6

Source: Oklahoma Conservation Commission  
Telephone: 405-521-4828  
Last EDR Contact: 02/10/2020  
Next Scheduled EDR Contact: 05/25/2020  
Data Release Frequency: Annually

## **Other Ascertainable Records**

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/16/2019  
Date Data Arrived at EDR: 12/16/2019  
Date Made Active in Reports: 12/20/2019  
Number of Days to Update: 4

Source: Environmental Protection Agency  
Telephone: 214-665-6444  
Last EDR Contact: 02/27/2020  
Next Scheduled EDR Contact: 04/06/2020  
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 11/12/2019  
Date Data Arrived at EDR: 11/19/2019  
Date Made Active in Reports: 01/28/2020  
Number of Days to Update: 70

Source: U.S. Army Corps of Engineers  
Telephone: 202-528-4285  
Last EDR Contact: 02/19/2020  
Next Scheduled EDR Contact: 06/01/2020  
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005  
Date Data Arrived at EDR: 11/10/2006  
Date Made Active in Reports: 01/11/2007  
Number of Days to Update: 62

Source: USGS  
Telephone: 888-275-8747  
Last EDR Contact: 01/10/2020  
Next Scheduled EDR Contact: 04/20/2020  
Data Release Frequency: Semi-Annually

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018	Source: U.S. Geological Survey
Date Data Arrived at EDR: 04/11/2018	Telephone: 888-275-8747
Date Made Active in Reports: 11/06/2019	Last EDR Contact: 01/09/2020
Number of Days to Update: 574	Next Scheduled EDR Contact: 04/20/2020
	Data Release Frequency: N/A

### SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/03/2017	Telephone: 615-532-8599
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 02/13/2020
Number of Days to Update: 63	Next Scheduled EDR Contact: 05/25/2020
	Data Release Frequency: Varies

### US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/16/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/19/2019	Telephone: 202-566-1917
Date Made Active in Reports: 02/27/2020	Last EDR Contact: 12/19/2019
Number of Days to Update: 70	Next Scheduled EDR Contact: 04/06/2020
	Data Release Frequency: Quarterly

### EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014	Telephone: 617-520-3000
Date Made Active in Reports: 06/17/2014	Last EDR Contact: 02/03/2020
Number of Days to Update: 88	Next Scheduled EDR Contact: 05/18/2020
	Data Release Frequency: Quarterly

### 2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/08/2018	Telephone: 703-308-4044
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 02/07/2020
Number of Days to Update: 73	Next Scheduled EDR Contact: 05/18/2020
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016	Source: EPA
Date Data Arrived at EDR: 06/21/2017	Telephone: 202-260-5521
Date Made Active in Reports: 01/05/2018	Last EDR Contact: 12/20/2019
Number of Days to Update: 198	Next Scheduled EDR Contact: 03/30/2020
	Data Release Frequency: Every 4 Years

## TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2017	Source: EPA
Date Data Arrived at EDR: 11/16/2018	Telephone: 202-566-0250
Date Made Active in Reports: 11/21/2019	Last EDR Contact: 02/05/2020
Number of Days to Update: 370	Next Scheduled EDR Contact: 06/01/2020
	Data Release Frequency: Annually

## SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 05/01/2019	Source: EPA
Date Data Arrived at EDR: 10/23/2019	Telephone: 202-564-4203
Date Made Active in Reports: 01/15/2020	Last EDR Contact: 01/24/2020
Number of Days to Update: 84	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Annually

## ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/30/2020	Source: EPA
Date Data Arrived at EDR: 02/05/2020	Telephone: 703-416-0223
Date Made Active in Reports: 02/14/2020	Last EDR Contact: 03/04/2020
Number of Days to Update: 9	Next Scheduled EDR Contact: 06/15/2020
	Data Release Frequency: Annually

## RMP: Risk Management Plans

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/25/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/02/2019	Telephone: 202-564-8600
Date Made Active in Reports: 05/23/2019	Last EDR Contact: 01/21/2020
Number of Days to Update: 21	Next Scheduled EDR Contact: 05/04/2020
	Data Release Frequency: Varies

### RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

### PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 01/30/2020	Source: EPA
Date Data Arrived at EDR: 02/06/2020	Telephone: 202-564-6023
Date Made Active in Reports: 02/14/2020	Last EDR Contact: 03/04/2020
Number of Days to Update: 8	Next Scheduled EDR Contact: 05/18/2020
	Data Release Frequency: Quarterly

### PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019	Source: EPA
Date Data Arrived at EDR: 10/11/2019	Telephone: 202-566-0500
Date Made Active in Reports: 12/20/2019	Last EDR Contact: 01/10/2020
Number of Days to Update: 70	Next Scheduled EDR Contact: 04/20/2020
	Data Release Frequency: Annually

### ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 01/06/2020
Number of Days to Update: 79	Next Scheduled EDR Contact: 04/20/2020
	Data Release Frequency: Quarterly

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009  
Date Data Arrived at EDR: 04/16/2009  
Date Made Active in Reports: 05/11/2009  
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances  
Telephone: 202-566-1667  
Last EDR Contact: 08/18/2017  
Next Scheduled EDR Contact: 12/04/2017  
Data Release Frequency: No Update Planned

### FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009  
Date Data Arrived at EDR: 04/16/2009  
Date Made Active in Reports: 05/11/2009  
Number of Days to Update: 25

Source: EPA  
Telephone: 202-566-1667  
Last EDR Contact: 08/18/2017  
Next Scheduled EDR Contact: 12/04/2017  
Data Release Frequency: No Update Planned

### MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019  
Date Data Arrived at EDR: 10/25/2019  
Date Made Active in Reports: 01/15/2020  
Number of Days to Update: 82

Source: Nuclear Regulatory Commission  
Telephone: 301-415-7169  
Last EDR Contact: 01/21/2020  
Next Scheduled EDR Contact: 05/04/2020  
Data Release Frequency: Quarterly

### COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018  
Date Data Arrived at EDR: 12/04/2019  
Date Made Active in Reports: 01/15/2020  
Number of Days to Update: 42

Source: Department of Energy  
Telephone: 202-586-8719  
Last EDR Contact: 03/06/2020  
Next Scheduled EDR Contact: 06/15/2020  
Data Release Frequency: Varies

### COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017  
Date Data Arrived at EDR: 03/05/2019  
Date Made Active in Reports: 11/11/2019  
Number of Days to Update: 251

Source: Environmental Protection Agency  
Telephone: N/A  
Last EDR Contact: 02/27/2020  
Next Scheduled EDR Contact: 06/15/2020  
Data Release Frequency: Varies

### PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019  
Date Data Arrived at EDR: 11/06/2019  
Date Made Active in Reports: 02/10/2020  
Number of Days to Update: 96

Source: Environmental Protection Agency  
Telephone: 202-566-0517  
Last EDR Contact: 02/07/2020  
Next Scheduled EDR Contact: 05/18/2020  
Data Release Frequency: Varies

### RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/01/2019  
Date Data Arrived at EDR: 07/01/2019  
Date Made Active in Reports: 09/23/2019  
Number of Days to Update: 84

Source: Environmental Protection Agency  
Telephone: 202-343-9775  
Last EDR Contact: 12/20/2019  
Next Scheduled EDR Contact: 04/13/2020  
Data Release Frequency: Quarterly

## HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006  
Date Data Arrived at EDR: 03/01/2007  
Date Made Active in Reports: 04/10/2007  
Number of Days to Update: 40

Source: Environmental Protection Agency  
Telephone: 202-564-2501  
Last EDR Contact: 12/17/2007  
Next Scheduled EDR Contact: 03/17/2008  
Data Release Frequency: No Update Planned

## HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006  
Date Data Arrived at EDR: 03/01/2007  
Date Made Active in Reports: 04/10/2007  
Number of Days to Update: 40

Source: Environmental Protection Agency  
Telephone: 202-564-2501  
Last EDR Contact: 12/17/2008  
Next Scheduled EDR Contact: 03/17/2008  
Data Release Frequency: No Update Planned

## DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 10/01/2019  
Date Data Arrived at EDR: 10/29/2019  
Date Made Active in Reports: 01/15/2020  
Number of Days to Update: 78

Source: Department of Transportation, Office of Pipeline Safety  
Telephone: 202-366-4595  
Last EDR Contact: 01/28/2020  
Next Scheduled EDR Contact: 05/11/2020  
Data Release Frequency: Quarterly

## CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2019  
Date Data Arrived at EDR: 01/17/2020  
Date Made Active in Reports: 03/06/2020  
Number of Days to Update: 49

Source: Department of Justice, Consent Decree Library  
Telephone: Varies  
Last EDR Contact: 01/06/2020  
Next Scheduled EDR Contact: 04/20/2020  
Data Release Frequency: Varies

## BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015  
Date Data Arrived at EDR: 02/22/2017  
Date Made Active in Reports: 09/28/2017  
Number of Days to Update: 218

Source: EPA/NTIS  
Telephone: 800-424-9346  
Last EDR Contact: 02/27/2020  
Next Scheduled EDR Contact: 04/06/2020  
Data Release Frequency: Biennially

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014	Source: USGS
Date Data Arrived at EDR: 07/14/2015	Telephone: 202-208-3710
Date Made Active in Reports: 01/10/2017	Last EDR Contact: 01/07/2020
Number of Days to Update: 546	Next Scheduled EDR Contact: 04/20/2020
	Data Release Frequency: Semi-Annually

## FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017	Source: Department of Energy
Date Data Arrived at EDR: 09/11/2018	Telephone: 202-586-3559
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 01/31/2020
Number of Days to Update: 3	Next Scheduled EDR Contact: 05/18/2020
	Data Release Frequency: Varies

## UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019	Source: Department of Energy
Date Data Arrived at EDR: 11/15/2019	Telephone: 505-845-0011
Date Made Active in Reports: 01/28/2020	Last EDR Contact: 02/21/2020
Number of Days to Update: 74	Next Scheduled EDR Contact: 06/01/2020
	Data Release Frequency: Varies

## LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/30/2020	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/05/2020	Telephone: 703-603-8787
Date Made Active in Reports: 02/14/2020	Last EDR Contact: 03/04/2020
Number of Days to Update: 9	Next Scheduled EDR Contact: 04/13/2020
	Data Release Frequency: Varies

## LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001	Source: American Journal of Public Health
Date Data Arrived at EDR: 10/27/2010	Telephone: 703-305-6451
Date Made Active in Reports: 12/02/2010	Last EDR Contact: 12/02/2009
Number of Days to Update: 36	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

## US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/12/2016  
Date Data Arrived at EDR: 10/26/2016  
Date Made Active in Reports: 02/03/2017  
Number of Days to Update: 100

Source: EPA  
Telephone: 202-564-2496  
Last EDR Contact: 09/26/2017  
Next Scheduled EDR Contact: 01/08/2018  
Data Release Frequency: Annually

## US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016  
Date Data Arrived at EDR: 10/26/2016  
Date Made Active in Reports: 02/03/2017  
Number of Days to Update: 100

Source: EPA  
Telephone: 202-564-2496  
Last EDR Contact: 09/26/2017  
Next Scheduled EDR Contact: 01/08/2018  
Data Release Frequency: Annually

## US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/06/2019  
Date Data Arrived at EDR: 11/25/2019  
Date Made Active in Reports: 01/28/2020  
Number of Days to Update: 64

Source: Department of Labor, Mine Safety and Health Administration  
Telephone: 303-231-5959  
Last EDR Contact: 02/25/2020  
Next Scheduled EDR Contact: 06/08/2020  
Data Release Frequency: Semi-Annually

## MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 12/03/2019  
Date Data Arrived at EDR: 12/03/2019  
Date Made Active in Reports: 01/28/2020  
Number of Days to Update: 56

Source: DOL, Mine Safety & Health Admi  
Telephone: 202-693-9424  
Last EDR Contact: 03/02/2020  
Next Scheduled EDR Contact: 06/15/2020  
Data Release Frequency: Quarterly

## US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005  
Date Data Arrived at EDR: 02/29/2008  
Date Made Active in Reports: 04/18/2008  
Number of Days to Update: 49

Source: USGS  
Telephone: 703-648-7709  
Last EDR Contact: 02/28/2020  
Next Scheduled EDR Contact: 06/08/2020  
Data Release Frequency: Varies

## US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011  
Date Data Arrived at EDR: 06/08/2011  
Date Made Active in Reports: 09/13/2011  
Number of Days to Update: 97

Source: USGS  
Telephone: 703-648-7709  
Last EDR Contact: 02/28/2020  
Next Scheduled EDR Contact: 06/08/2020  
Data Release Frequency: Varies

## ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/09/2019  
Date Data Arrived at EDR: 12/11/2019  
Date Made Active in Reports: 02/27/2020  
Number of Days to Update: 78

Source: Department of Interior  
Telephone: 202-208-2609  
Last EDR Contact: 03/05/2020  
Next Scheduled EDR Contact: 06/22/2020  
Data Release Frequency: Quarterly

## FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/22/2019  
Date Data Arrived at EDR: 12/04/2019  
Date Made Active in Reports: 03/02/2020  
Number of Days to Update: 89

Source: EPA  
Telephone: (214) 665-2200  
Last EDR Contact: 03/03/2020  
Next Scheduled EDR Contact: 06/15/2020  
Data Release Frequency: Quarterly

## ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/05/2020  
Date Data Arrived at EDR: 01/07/2020  
Date Made Active in Reports: 03/06/2020  
Number of Days to Update: 59

Source: Environmental Protection Agency  
Telephone: 202-564-2280  
Last EDR Contact: 01/07/2020  
Next Scheduled EDR Contact: 04/20/2020  
Data Release Frequency: Quarterly

## DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018  
Date Data Arrived at EDR: 07/26/2018  
Date Made Active in Reports: 10/05/2018  
Number of Days to Update: 71

Source: Environmental Protection Agency  
Telephone: 202-564-0527  
Last EDR Contact: 02/21/2020  
Next Scheduled EDR Contact: 06/08/2020  
Data Release Frequency: Varies

## UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017  
Date Data Arrived at EDR: 01/17/2019  
Date Made Active in Reports: 04/01/2019  
Number of Days to Update: 74

Source: Department of Defense  
Telephone: 703-704-1564  
Last EDR Contact: 01/13/2020  
Next Scheduled EDR Contact: 04/27/2020  
Data Release Frequency: Varies

## FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/18/2019  
Date Data Arrived at EDR: 11/19/2019  
Date Made Active in Reports: 01/28/2020  
Number of Days to Update: 70

Source: EPA  
Telephone: 800-385-6164  
Last EDR Contact: 02/19/2020  
Next Scheduled EDR Contact: 06/01/2020  
Data Release Frequency: Quarterly

## AIRS: Permitted AIRS Facility Listing

A listing of permitted AIRS facility locations.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/17/2019  
Date Data Arrived at EDR: 12/18/2019  
Date Made Active in Reports: 03/03/2020  
Number of Days to Update: 76

Source: Department of Environmental Quality  
Telephone: 405-702-4100  
Last EDR Contact: 12/17/2019  
Next Scheduled EDR Contact: 04/06/2020  
Data Release Frequency: Quarterly

## DRYCLEANERS: Drycleaner Facilities

A listing of drycleaner facility locations.

Date of Government Version: 12/17/2019  
Date Data Arrived at EDR: 12/18/2019  
Date Made Active in Reports: 03/03/2020  
Number of Days to Update: 76

Source: Department of Environmental Quality  
Telephone: 405-702-9100  
Last EDR Contact: 12/17/2019  
Next Scheduled EDR Contact: 04/06/2020  
Data Release Frequency: Quarterly

## Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information.

Date of Government Version: 07/25/2014  
Date Data Arrived at EDR: 11/06/2014  
Date Made Active in Reports: 01/13/2015  
Number of Days to Update: 68

Source: Department of Environmental Quality  
Telephone: 405-702-5105  
Last EDR Contact: 02/10/2020  
Next Scheduled EDR Contact: 05/25/2020  
Data Release Frequency: No Update Planned

## Financial Assurance 2: Financial Assurance Information Listing

Financial Assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/10/2013  
Date Data Arrived at EDR: 12/12/2013  
Date Made Active in Reports: 01/24/2014  
Number of Days to Update: 43

Source: Department of Environmental Quality  
Telephone: 405-702-5100  
Last EDR Contact: 02/10/2020  
Next Scheduled EDR Contact: 05/25/2020  
Data Release Frequency: No Update Planned

## TIER 2: Tier 2 Data Listing

A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.

Date of Government Version: 12/31/2018  
Date Data Arrived at EDR: 09/10/2019  
Date Made Active in Reports: 11/21/2019  
Number of Days to Update: 72

Source: Department of Environmental Quality  
Telephone: 405-702-1000  
Last EDR Contact: 12/06/2019  
Next Scheduled EDR Contact: 03/23/2020  
Data Release Frequency: Annually

## UIC: Underground Injection Wells Database Listing

Class I injection wells. CLASS I wells are used to inject liquid hazardous and non-hazardous wastes beneath the lower most Underground Sources of Drinking Water (USDW).

Date of Government Version: 10/15/2019  
Date Data Arrived at EDR: 10/17/2019  
Date Made Active in Reports: 12/11/2019  
Number of Days to Update: 55

Source: Department of Environmental Quality  
Telephone: 405-702-5188  
Last EDR Contact: 01/15/2020  
Next Scheduled EDR Contact: 04/27/2020  
Data Release Frequency: Varies

## MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 04/06/2018  
Date Data Arrived at EDR: 10/21/2019  
Date Made Active in Reports: 10/24/2019  
Number of Days to Update: 3

Source: USGS  
Telephone: 703-648-6533  
Last EDR Contact: 02/28/2020  
Next Scheduled EDR Contact: 06/08/2020  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## EDR HIGH RISK HISTORICAL RECORDS

### ***EDR Exclusive Records***

#### EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: EDR, Inc.  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

#### EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: EDR, Inc.  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: Varies

#### EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: EDR, Inc.  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: Varies

## EDR RECOVERED GOVERNMENT ARCHIVES

### ***Exclusive Recovered Govt. Archives***

#### RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Oklahoma.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A  
Date Data Arrived at EDR: 07/01/2013  
Date Made Active in Reports: 01/03/2014  
Number of Days to Update: 186

Source: Department of Environmental Quality  
Telephone: N/A  
Last EDR Contact: 06/01/2012  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: Varies

## RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Oklahoma.

Date of Government Version: N/A  
Date Data Arrived at EDR: 07/01/2013  
Date Made Active in Reports: 01/20/2014  
Number of Days to Update: 203

Source: Department of Environmental Quality  
Telephone: N/A  
Last EDR Contact: 06/01/2012  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: Varies

## RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Oklahoma Corporation Commission in Oklahoma.

Date of Government Version: N/A  
Date Data Arrived at EDR: 07/01/2013  
Date Made Active in Reports: 12/27/2013  
Number of Days to Update: 179

Source: Oklahoma Corporation Commission  
Telephone: N/A  
Last EDR Contact: 06/01/2012  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: Varies

## OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

## CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/30/2020  
Date Data Arrived at EDR: 01/30/2020  
Date Made Active in Reports: 03/09/2020  
Number of Days to Update: 39

Source: Department of Energy & Environmental Protection  
Telephone: 860-424-3375  
Last EDR Contact: 01/30/2020  
Next Scheduled EDR Contact: 05/25/2020  
Data Release Frequency: No Update Planned

## NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019  
Date Data Arrived at EDR: 05/01/2019  
Date Made Active in Reports: 06/21/2019  
Number of Days to Update: 51

Source: Department of Environmental Conservation  
Telephone: 518-402-8651  
Last EDR Contact: 01/31/2020  
Next Scheduled EDR Contact: 05/11/2020  
Data Release Frequency: Quarterly

## WI MANIFEST: Manifest Information

Hazardous waste manifest information.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/31/2018  
Date Data Arrived at EDR: 06/19/2019  
Date Made Active in Reports: 09/03/2019  
Number of Days to Update: 76

Source: Department of Natural Resources  
Telephone: N/A  
Last EDR Contact: 03/09/2020  
Next Scheduled EDR Contact: 06/22/2020  
Data Release Frequency: Annually

## Oil/Gas Pipelines

Source: Endeavor Business Media  
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

## Electric Power Transmission Line Data

Source: Endeavor Business Media  
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**Sensitive Receptors:** There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

## AHA Hospitals:

Source: American Hospital Association, Inc.  
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

## Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services  
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

## Nursing Homes

Source: National Institutes of Health  
Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

## Public Schools

Source: National Center for Education Statistics  
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

## Private Schools

Source: National Center for Education Statistics  
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

## Daycare Centers: Day Care Centers

Source: Department of Human Services  
Telephone: 405-521-3561

**Flood Zone Data:** This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA  
Telephone: 877-336-2627  
Date of Government Version: 2003, 2015

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Current USGS 7.5 Minute Topographic Map  
Source: U.S. Geological Survey

### STREET AND ADDRESS INFORMATION

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## GEOCHECK<sup>®</sup> - PHYSICAL SETTING SOURCE ADDENDUM

### TARGET PROPERTY ADDRESS

OK STATE VETERANS CEMETERY  
MYALL SW AND COMMERCE STREETS  
ARDMORE, OK 73401

### TARGET PROPERTY COORDINATES

Latitude (North):	34.159382 - 34° 9' 33.78"
Longitude (West):	97.147311 - 97° 8' 50.32"
Universal Transverse Mercator:	Zone 14
UTM X (Meters):	670786.6
UTM Y (Meters):	3781184.0
Elevation:	848 ft. above sea level

### USGS TOPOGRAPHIC MAP

Target Property Map:	5927882 ARDMORE WEST, OK
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

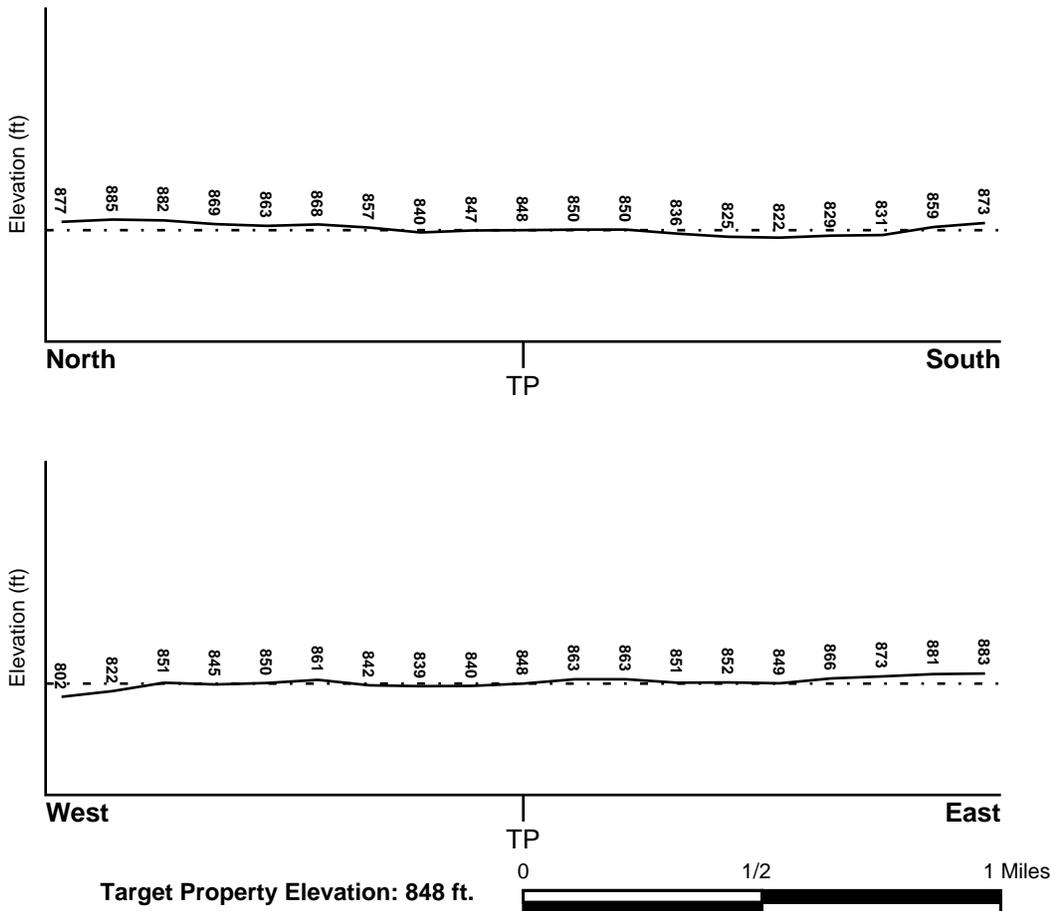
## TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

## TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General West

## SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

## **FEMA FLOOD ZONE**

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
40019C0445C	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
Not Reported	

## **NATIONAL WETLAND INVENTORY**

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
ARDMORE WEST	YES - refer to the Overview Map and Detail Map

## HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

## **AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

#### **ROCK STRATIGRAPHIC UNIT**

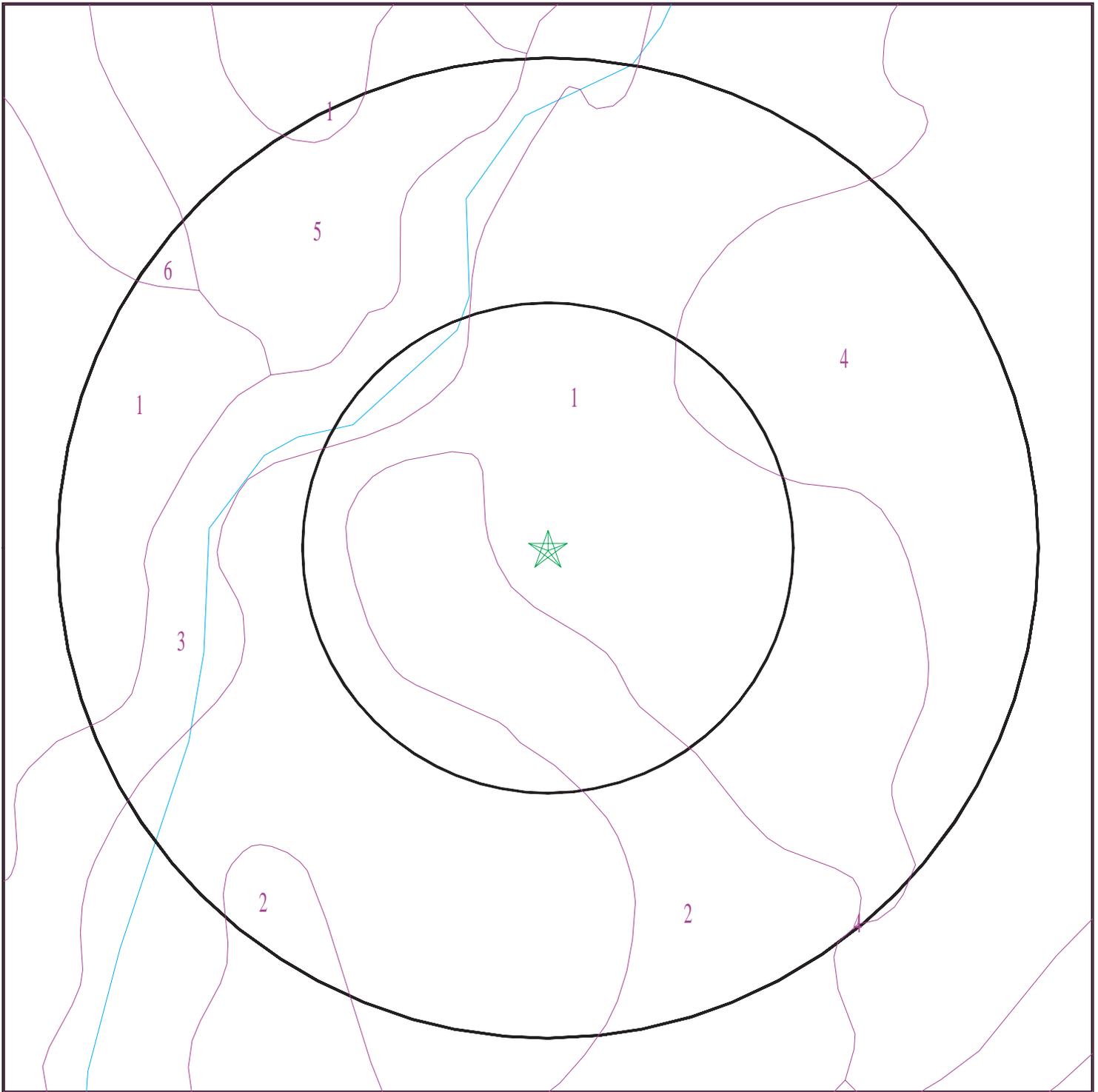
Era:	Paleozoic
System:	Pennsylvanian
Series:	Virgilian Series
Code:	PP4 ( <i>decoded above as Era, System &amp; Series</i> )

#### **GEOLOGIC AGE IDENTIFICATION**

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

# SSURGO SOIL MAP - 6002813.2s



- ★ Target Property
- SSURGO Soil
- Water



SITE NAME: OK State Veterans Cemetery  
ADDRESS: Myall SW and Commerce Streets  
Ardmore OK 73401  
LAT/LONG: 34.159382 / 97.147311

CLIENT: Eagle Env. Consulting Inc.  
CONTACT: Steve Votaw  
INQUIRY #: 6002813.2s  
DATE: March 10, 2020 9:15 am

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

#### Soil Map ID: 1

Soil Component Name: Normangee

Soil Surface Texture: loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	5 inches	loam	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6
2	27 inches	55 inches	clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6
3	55 inches	79 inches	clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6
4	5 inches	27 inches	clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6

#### Soil Map ID: 2

Soil Component Name: Wilson

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 7.8 Min: 5.6
2	25 inches	51 inches	silty clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 7.8 Min: 5.6
3	51 inches	79 inches	clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 7.8 Min: 5.6
4	7 inches	25 inches	silty clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 7.8 Min: 5.6

### Soil Map ID: 3

Soil Component Name: Pulaski

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	20 inches	fine sandy loam	Not reported	Not reported	Max: 42.33 Min: 14.114	Max: 8.4 Min: 5.6
2	20 inches	29 inches	fine sandy loam	Not reported	Not reported	Max: 42.33 Min: 14.114	Max: 8.4 Min: 5.6
3	29 inches	79 inches	stratified loamy fine sand to loam	Not reported	Not reported	Max: 42.33 Min: 14.114	Max: 8.4 Min: 5.6

### Soil Map ID: 4

Soil Component Name: Durant

Soil Surface Texture: loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	9 inches	loam	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6
2	9 inches	16 inches	clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6
3	16 inches	46 inches	clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
4	46 inches	79 inches	clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6

### Soil Map ID: 5

Soil Component Name: Normangee

Soil Surface Texture: clay loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	5 inches	clay loam	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6
2	5 inches	11 inches	clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6
3	53 inches	79 inches	clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6
4	11 inches	53 inches	clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 5.6

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**Soil Map ID: 6**

Soil Component Name: Clarita

Soil Surface Texture: silty clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	12 inches	silty clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 7.9
2	12 inches	24 inches	silty clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 7.9
3	24 inches	44 inches	silty clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 7.9
4	44 inches	79 inches	silty clay	Not reported	Not reported	Max: 0.4233 Min: 0.0106	Max: 8.4 Min: 7.9

**LOCAL / REGIONAL WATER AGENCY RECORDS**

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

## **FEDERAL USGS WELL INFORMATION**

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

## **FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION**

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

## **STATE DATABASE WELL INFORMATION**

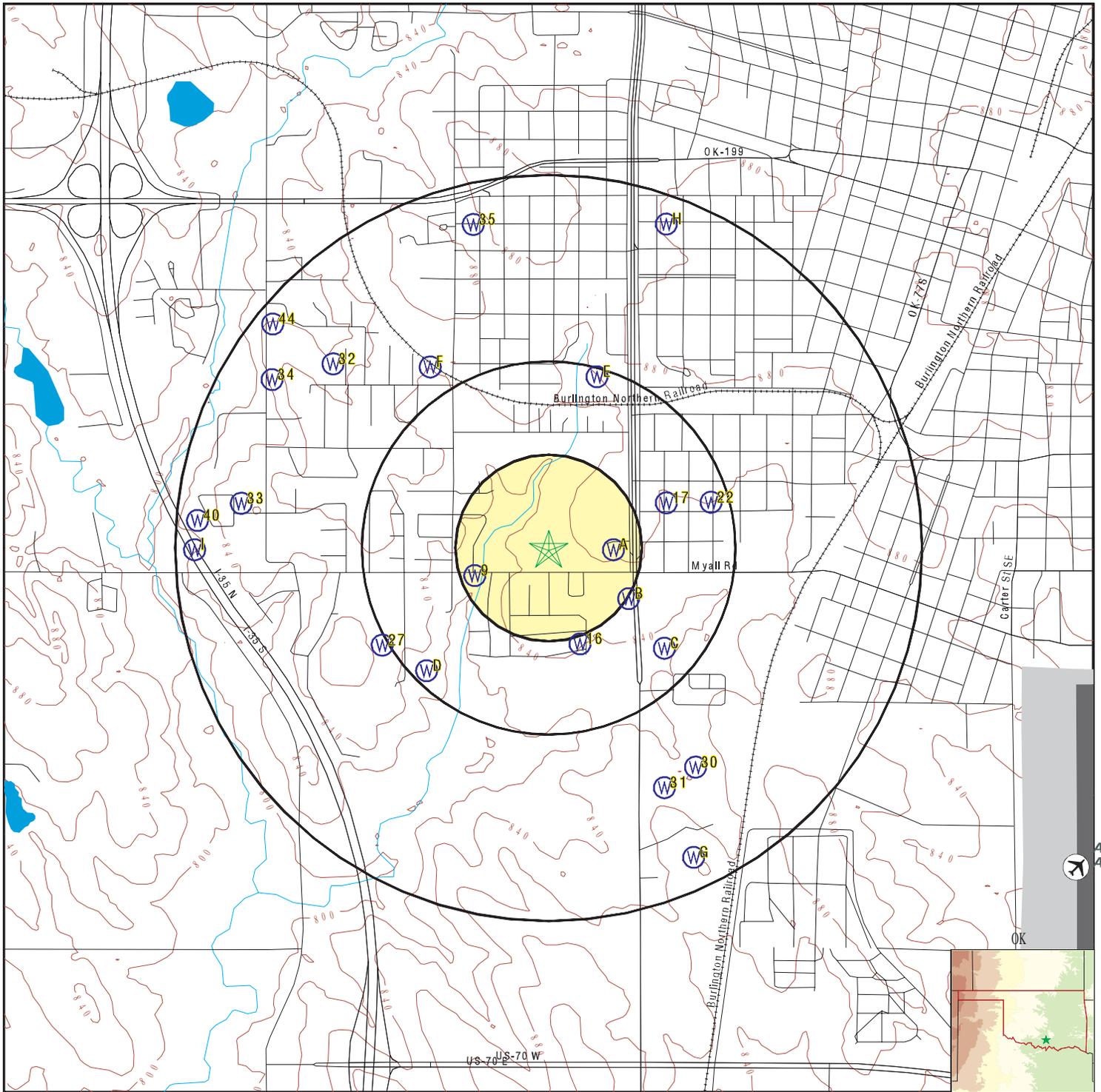
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
A1	OK6000000056344	1/8 - 1/4 Mile East
A2	OK6000000056345	1/8 - 1/4 Mile East
A3	OK6000000056342	1/8 - 1/4 Mile East
A4	OK6000000056343	1/8 - 1/4 Mile East
A5	OK6000000056348	1/8 - 1/4 Mile East
A6	OK6000000056349	1/8 - 1/4 Mile East
A7	OK6000000056346	1/8 - 1/4 Mile East
A8	OK6000000056347	1/8 - 1/4 Mile East
9	OK6000000158577	1/8 - 1/4 Mile WSW
B10	OK6000000094490	1/8 - 1/4 Mile SE
B11	OK6000000094613	1/8 - 1/4 Mile SE
B12	OK6000000092697	1/4 - 1/2 Mile ESE
B13	OK6000000092696	1/4 - 1/2 Mile ESE
B14	OK6000000092699	1/4 - 1/2 Mile ESE
B15	OK6000000092698	1/4 - 1/2 Mile ESE
16	OK6000000117115	1/4 - 1/2 Mile SSE
17	OK6000000053756	1/4 - 1/2 Mile ENE
C18	OK6000000061336	1/4 - 1/2 Mile SE
C19	OK6000000061335	1/4 - 1/2 Mile SE
C20	OK6000000061338	1/4 - 1/2 Mile SE
C21	OK6000000061337	1/4 - 1/2 Mile SE
22	OK6000000157613	1/4 - 1/2 Mile ENE
D23	OK6000000093078	1/4 - 1/2 Mile SW
D24	OK6000000093483	1/4 - 1/2 Mile SW
E25	OK6000000104316	1/4 - 1/2 Mile NNE

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
E26	OK6000000104181	1/4 - 1/2 Mile NNE
27	OK6000000091044	1/2 - 1 Mile WSW
F28	OK6000000104853	1/2 - 1 Mile NNW
F29	OK6000000079457	1/2 - 1 Mile NNW
30	OK6000000170181	1/2 - 1 Mile SE
31	OK6000000029546	1/2 - 1 Mile SSE
32	OK6000000082275	1/2 - 1 Mile NW
33	OK6000000016923	1/2 - 1 Mile West
34	OK6000000136165	1/2 - 1 Mile WNW
35	OK6000000054887	1/2 - 1 Mile NNW
G36	OK6000000135496	1/2 - 1 Mile SSE
G37	OK6000000153877	1/2 - 1 Mile SSE
H38	OK6000000054368	1/2 - 1 Mile NNE
H39	OK6000000054369	1/2 - 1 Mile NNE
40	OK6000000099862	1/2 - 1 Mile West
I41	OK6000000054880	1/2 - 1 Mile West
I42	OK6000000054883	1/2 - 1 Mile West
I43	OK6000000054885	1/2 - 1 Mile West
44	OK6000000101415	1/2 - 1 Mile NW

# PHYSICAL SETTING SOURCE MAP - 6002813.2s



ARDMORE AIRPORT

- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Oil, gas or related wells



SITE NAME: OK State Veterans Cemetery  
 ADDRESS: Myall SW and Commerce Streets  
 Ardmore OK 73401  
 LAT/LONG: 34.159382 / 97.147311

CLIENT: Eagle Env. Consulting Inc.  
 CONTACT: Steve Votaw  
 INQUIRY #: 6002813.2s  
 DATE: March 10, 2020 9:15 am

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**A1**  
**East**  
**1/8 - 1/4 Mile**  
**Higher**

**OK WELLS      OK6000000056344**

Well ID:	58038	Permit #:	Not Reported
Well Owner:	Bear Creek Partnership	Well Type:	Monitoring Well
Water Use:	Water Quality	Elevation:	0
Total Well Depth:	24	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	19971014
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58038">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58038</a>		

**A2**  
**East**  
**1/8 - 1/4 Mile**  
**Higher**

**OK WELLS      OK6000000056345**

Well ID:	58039	Permit #:	Not Reported
Well Owner:	Bear Creek Partnership	Well Type:	Monitoring Well
Water Use:	Water Quality	Elevation:	0
Total Well Depth:	19	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	19971016
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58039">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58039</a>		

**A3**  
**East**  
**1/8 - 1/4 Mile**  
**Higher**

**OK WELLS      OK6000000056342**

Well ID:	58036	Permit #:	Not Reported
Well Owner:	Bear Creek Partnership	Well Type:	Monitoring Well
Water Use:	Water Quality	Elevation:	0
Total Well Depth:	49	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	19971015
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58036">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58036</a>		

**A4**  
**East**  
**1/8 - 1/4 Mile**  
**Higher**

**OK WELLS      OK6000000056343**

Well ID:	58037	Permit #:	Not Reported
Well Owner:	Bear Creek Partnership	Well Type:	Monitoring Well
Water Use:	Water Quality	Elevation:	0
Total Well Depth:	22	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	19971014
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58037">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58037</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**A5**  
**East**  
**1/8 - 1/4 Mile**  
**Higher**

**OK WELLS      OK6000000056348**

Well ID:	58042	Permit #:	Not Reported
Well Owner:	Bear Creek Partnership	Well Type:	Monitoring Well
Water Use:	Water Quality	Elevation:	0
Total Well Depth:	50	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	199711 7
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58042">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58042</a>		

**A6**  
**East**  
**1/8 - 1/4 Mile**  
**Higher**

**OK WELLS      OK6000000056349**

Well ID:	58043	Permit #:	Not Reported
Well Owner:	Bear Creek Partnership	Well Type:	Monitoring Well
Water Use:	Water Quality	Elevation:	0
Total Well Depth:	50	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	199711 7
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58043">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58043</a>		

**A7**  
**East**  
**1/8 - 1/4 Mile**  
**Higher**

**OK WELLS      OK6000000056346**

Well ID:	58040	Permit #:	Not Reported
Well Owner:	Bear Creek Partnership	Well Type:	Monitoring Well
Water Use:	Water Quality	Elevation:	0
Total Well Depth:	54	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	19971016
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58040">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58040</a>		

**A8**  
**East**  
**1/8 - 1/4 Mile**  
**Higher**

**OK WELLS      OK6000000056347**

Well ID:	58041	Permit #:	Not Reported
Well Owner:	Bear Creek Partnership	Well Type:	Geotechnical Boring
Water Use:	Soil Evaluation	Elevation:	0
Total Well Depth:	0	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	19971117
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58041">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=58041</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**9**  
**WSW**  
**1/8 - 1/4 Mile**  
**Lower**

**OK WELLS      OK6000000158577**

Well ID:	161081	Permit #:	Not Reported
Well Owner:	cashco properties	Well Type:	Groundwater Well
Water Use:	Domestic	Elevation:	0
Total Well Depth:	130	Depth to First Water:	40
Approximate Yield:	25	Construction Date:	2014 6 5
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=161081">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=161081</a>		

**B10**  
**SE**  
**1/8 - 1/4 Mile**  
**Higher**

**OK WELLS      OK6000000094490**

Well ID:	95739	Permit #:	Not Reported
Well Owner:	Hiland Dairy	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	30	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2005 329
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=95739">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=95739</a>		

**B11**  
**SE**  
**1/8 - 1/4 Mile**  
**Higher**

**OK WELLS      OK6000000094613**

Well ID:	95740	Permit #:	Not Reported
Well Owner:	Hiland Dairy	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	35	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2005 329
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=95740">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=95740</a>		

**B12**  
**ESE**  
**1/4 - 1/2 Mile**  
**Higher**

**OK WELLS      OK6000000092697**

Well ID:	93886	Permit #:	Not Reported
Well Owner:	Hiland Dairy	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	35	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2005 329
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93886">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93886</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**B13**  
**ESE**  
**1/4 - 1/2 Mile**  
**Higher**

**OK WELLS      OK6000000092696**

Well ID:	93885	Permit #:	Not Reported
Well Owner:	Hiland Dairy	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	35	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2005 329
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93885">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93885</a>		

**B14**  
**ESE**  
**1/4 - 1/2 Mile**  
**Higher**

**OK WELLS      OK6000000092699**

Well ID:	93888	Permit #:	Not Reported
Well Owner:	Hiland Dairy	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	35	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2005 329
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93888">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93888</a>		

**B15**  
**ESE**  
**1/4 - 1/2 Mile**  
**Higher**

**OK WELLS      OK6000000092698**

Well ID:	93887	Permit #:	Not Reported
Well Owner:	Hiland Dairy	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	30	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2005 329
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93887">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93887</a>		

**16**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

**OK WELLS      OK6000000117115**

Well ID:	117307	Permit #:	Not Reported
Well Owner:	Ken Fackeral	Well Type:	Groundwater Test Hole
Water Use:	Water Location	Elevation:	0
Total Well Depth:	120	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2008 6 6
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=117307">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=117307</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**17**  
**ENE**  
**1/4 - 1/2 Mile**  
**Higher**

**OK WELLS      OK6000000053756**

Well ID:	54840	Permit #:	Not Reported
Well Owner:	ONE STOP K-M	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	14	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	1994 2 5
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54840">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54840</a>		

**C18**  
**SE**  
**1/4 - 1/2 Mile**  
**Lower**

**OK WELLS      OK6000000061336**

Well ID:	60630	Permit #:	Not Reported
Well Owner:	Hiland Dairy c/o Geosearch Env	Well Type:	Geotechnical Boring
Water Use:	Soil Evaluation	Elevation:	0
Total Well Depth:	20	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2001 321
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=60630">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=60630</a>		

**C19**  
**SE**  
**1/4 - 1/2 Mile**  
**Lower**

**OK WELLS      OK6000000061335**

Well ID:	60629	Permit #:	Not Reported
Well Owner:	Hiland Dairy c/o Geosearch Env	Well Type:	Geotechnical Boring
Water Use:	Soil Evaluation	Elevation:	0
Total Well Depth:	15	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2001 321
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=60629">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=60629</a>		

**C20**  
**SE**  
**1/4 - 1/2 Mile**  
**Lower**

**OK WELLS      OK6000000061338**

Well ID:	60632	Permit #:	Not Reported
Well Owner:	Hiland Dairy c/o Geosearch Env	Well Type:	Geotechnical Boring
Water Use:	Soil Evaluation	Elevation:	0
Total Well Depth:	10	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2001 321
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=60632">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=60632</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**C21**  
**SE**  
**1/4 - 1/2 Mile**  
**Lower**

**OK WELLS      OK6000000061337**

Well ID:	60631	Permit #:	Not Reported
Well Owner:	Hiland Dairy c/o Geosearch Env	Well Type:	Geotechnical Boring
Water Use:	Soil Evaluation	Elevation:	0
Total Well Depth:	10	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2001 321
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=60631">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=60631</a>		

**22**  
**ENE**  
**1/4 - 1/2 Mile**  
**Higher**

**OK WELLS      OK6000000157613**

Well ID:	136098	Permit #:	Not Reported
Well Owner:	Ryan W. Hackett	Well Type:	Geotechnical Boring
Water Use:	Soil Evaluation	Elevation:	0
Total Well Depth:	16.5	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2011 4 4
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=136098">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=136098</a>		

**D23**  
**SW**  
**1/4 - 1/2 Mile**  
**Lower**

**OK WELLS      OK6000000093078**

Well ID:	93072	Permit #:	Not Reported
Well Owner:	Harlen Seeliger	Well Type:	Groundwater Test Hole
Water Use:	Water Location	Elevation:	0
Total Well Depth:	300	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2005 4 5
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93072">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93072</a>		

**D24**  
**SW**  
**1/4 - 1/2 Mile**  
**Lower**

**OK WELLS      OK6000000093483**

Well ID:	93073	Permit #:	Not Reported
Well Owner:	Harlen Seeliger	Well Type:	Groundwater Well
Water Use:	Domestic	Elevation:	0
Total Well Depth:	107	Depth to First Water:	45
Approximate Yield:	55	Construction Date:	2005 4 5
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93073">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=93073</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**E25**  
**NNE**  
**1/4 - 1/2 Mile**  
**Higher**

**OK WELLS      OK6000000104316**

Well ID:	103427	Permit #:	Not Reported
Well Owner:	Chris Craddock	Well Type:	Groundwater Test Hole
Water Use:	Water Location	Elevation:	0
Total Well Depth:	240	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2006 717
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=103427">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=103427</a>		

**E26**  
**NNE**  
**1/4 - 1/2 Mile**  
**Higher**

**OK WELLS      OK6000000104181**

Well ID:	103426	Permit #:	Not Reported
Well Owner:	Chris Craddock	Well Type:	Groundwater Test Hole
Water Use:	Water Location	Elevation:	0
Total Well Depth:	120	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2006 717
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=103426">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=103426</a>		

**27**  
**WSW**  
**1/2 - 1 Mile**  
**Higher**

**OK WELLS      OK6000000091044**

Well ID:	92627	Permit #:	Not Reported
Well Owner:	Site Excell	Well Type:	Geotechnical Boring
Water Use:	Soil Evaluation	Elevation:	0
Total Well Depth:	39	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2005 315
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=92627">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=92627</a>		

**F28**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**OK WELLS      OK6000000104853**

Well ID:	106281	Permit #:	Not Reported
Well Owner:	Scott Meadows	Well Type:	Groundwater Test Hole
Water Use:	Water Location	Elevation:	0
Total Well Depth:	260	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	20061212
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=106281">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=106281</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**F29**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**OK WELLS      OK6000000079457**

Well ID:	78773	Permit #:	Not Reported
Well Owner:	Mr. Aldo Waters	Well Type:	Geotechnical Boring
Water Use:	Soil Evaluation	Elevation:	0
Total Well Depth:	21.5	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2003 6 2
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=78773">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=78773</a>		

**30**  
**SE**  
**1/2 - 1 Mile**  
**Lower**

**OK WELLS      OK6000000170181**

Well ID:	170095	Permit #:	Not Reported
Well Owner:	Jesse Clinton	Well Type:	Groundwater Well
Water Use:	Domestic	Elevation:	0
Total Well Depth:	190	Depth to First Water:	60
Approximate Yield:	25	Construction Date:	2015 8 23
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=170095">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=170095</a>		

**31**  
**SSE**  
**1/2 - 1 Mile**  
**Higher**

**OK WELLS      OK6000000029546**

Well ID:	30362	Permit #:	Not Reported
Well Owner:	Jerry Williams	Well Type:	Groundwater Well
Water Use:	Domestic	Elevation:	0
Total Well Depth:	60	Depth to First Water:	18
Approximate Yield:	0	Construction Date:	1993 9 4
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=30362">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=30362</a>		

**32**  
**NW**  
**1/2 - 1 Mile**  
**Lower**

**OK WELLS      OK6000000082275**

Well ID:	82915	Permit #:	Not Reported
Well Owner:	SRC Construction	Well Type:	Geotechnical Boring
Water Use:	Soil Evaluation	Elevation:	0
Total Well Depth:	20	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2003 9 26
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=82915">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=82915</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**33**  
**West**  
**1/2 - 1 Mile**  
**Higher**

**OK WELLS      OK6000000016923**

Well ID:	17412	Permit #:	Not Reported
Well Owner:	Derral McGuire	Well Type:	Groundwater Well
Water Use:	Domestic	Elevation:	0
Total Well Depth:	100	Depth to First Water:	18
Approximate Yield:	100	Construction Date:	1990 717
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=17412">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=17412</a>		

**34**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**OK WELLS      OK6000000136165**

Well ID:	141429	Permit #:	Not Reported
Well Owner:	Flanagan Quality homes	Well Type:	Groundwater Well
Water Use:	Domestic	Elevation:	0
Total Well Depth:	180	Depth to First Water:	80
Approximate Yield:	60	Construction Date:	2012 131
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=141429">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=141429</a>		

**35**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**OK WELLS      OK6000000054887**

Well ID:	54350	Permit #:	Not Reported
Well Owner:	O G & E/STOVER & ASSOCIATES	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	23	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	1992 415
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54350">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54350</a>		

**G36**  
**SSE**  
**1/2 - 1 Mile**  
**Higher**

**OK WELLS      OK6000000135496**

Well ID:	155028	Permit #:	Not Reported
Well Owner:	LWN Properties	Well Type:	Groundwater Well
Water Use:	Domestic	Elevation:	0
Total Well Depth:	240	Depth to First Water:	35
Approximate Yield:	25	Construction Date:	2013 9 6
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=155028">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=155028</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**G37**  
**SSE**  
**1/2 - 1 Mile**  
**Higher**

**OK WELLS      OK6000000153877**

Well ID:	154500	Permit #:	Not Reported
Well Owner:	LWN Properties	Well Type:	Groundwater Well
Water Use:	Domestic	Elevation:	0
Total Well Depth:	240	Depth to First Water:	40
Approximate Yield:	25	Construction Date:	2013 9 6
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=154500">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=154500</a>		

**H38**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**OK WELLS      OK6000000054368**

Well ID:	54689	Permit #:	Not Reported
Well Owner:	CARTER COUNTY	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	11	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	1990 7 30
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54689">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54689</a>		

**H39**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**OK WELLS      OK6000000054369**

Well ID:	54690	Permit #:	Not Reported
Well Owner:	CARTER COUNTY	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	11	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	1990 7 30
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54690">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54690</a>		

**40**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**OK WELLS      OK6000000099862**

Well ID:	100501	Permit #:	Not Reported
Well Owner:	Ken Riddley	Well Type:	Groundwater Test Hole
Water Use:	Water Location	Elevation:	0
Total Well Depth:	300	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	2006 3 27
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=100501">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=100501</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**I41**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**OK WELLS      OK6000000054880**

Well ID:	54343	Permit #:	Not Reported
Well Owner:	CLOWE 66	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	15	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	199512 8
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54343">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54343</a>		

**I42**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**OK WELLS      OK6000000054883**

Well ID:	54346	Permit #:	Not Reported
Well Owner:	PHILLIPS/CLOWE	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	6	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	19951227
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54346">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54346</a>		

**I43**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**OK WELLS      OK6000000054885**

Well ID:	54348	Permit #:	Not Reported
Well Owner:	TOTAL	Well Type:	Monitoring Well
Water Use:	Site Assessment	Elevation:	0
Total Well Depth:	15	Depth to First Water:	0
Approximate Yield:	0	Construction Date:	199512 5
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54348">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=54348</a>		

**44**  
**NW**  
**1/2 - 1 Mile**  
**Lower**

**OK WELLS      OK6000000101415**

Well ID:	103050	Permit #:	Not Reported
Well Owner:	Kieth Gray	Well Type:	Groundwater Well
Water Use:	Domestic	Elevation:	0
Total Well Depth:	170	Depth to First Water:	110
Approximate Yield:	25	Construction Date:	2006 7 9
Aquifer Code:	Not Reported	Basin Code:	Not Reported
URL:	<a href="http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=103050">http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=103050</a>		

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

## AREA RADON INFORMATION

State Database: OK Radon

### Radon Test Results

Zipcode	Num Tests	# > 4 pCi/L	Maximum	Average
73401	36	0	2.4	0.981

Federal EPA Radon Zone for CARTER County: 3

- Note: Zone 1 indoor average level > 4 pCi/L.  
 : Zone 2 indoor average level  $\geq$  2 pCi/L and  $\leq$  4 pCi/L.  
 : Zone 3 indoor average level < 2 pCi/L.

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Federal Area Radon Information for Zip Code: 73401

Number of sites tested: 18

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.600 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

### USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

### Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

## HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

## HYDROGEOLOGIC INFORMATION

### AQUIFLOW<sup>R</sup> Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

### Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

### SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

### FEDERAL WATER WELLS

#### PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

#### PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

#### USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

### STATE RECORDS

#### Reported Well Locations in Oklahoma

Source: Oklahoma Water Resources Board

Telephone: 405-530-8800

## OTHER STATE DATABASE INFORMATION

#### Oil and Gas Well Listing

Source: Oklahoma Corporation Commission

Telephone: 405-521-3636

Oil and gas well locations in the state.

#### Oil and Gas Well Listing

Source: Osage Nation Environmental and Natural Resources

Telephone: 918-287-5333

Oil and gas well locations.

### RADON

#### State Database: OK Radon

Source: Department of Environmental Quality

Telephone: 405-702-5100

Radon Information

#### Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

#### EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

## PHYSICAL SETTING SOURCE RECORDS SEARCHED

### OTHER

Airport Landing Facilities: Private and public use landing facilities  
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater  
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

### **STREET AND ADDRESS INFORMATION**

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## **Appendix F**

### **Qualifications**



**Steven R. Votaw**  
**President**

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**Education**

- |      |      |   |
|------|------|---|
|      | 1992 | Post Graduate Studies in Environmental Science Program<br>Oklahoma State University, Stillwater, OK |
| B.S. | 1988 | Fisheries Management and Wildlife Biology<br>Northeastern State University, Tahlequah, OK           |

**Professional Experience**

1999 – Present

President

Eagle Environmental Consulting, Inc.

1991-1999

Senior Regulatory Project Manager, Regulatory Branch

U.S. Army Corps of Engineers

1989 – 1991

Park Ranger, Buckhorn Lake, Kentucky

U.S. Army Corps of Engineers

1987-1989

Fisheries Technician

Oklahoma Department of Wildlife Conservation

***1999 to Present:***

Founder and President of Eagle Environmental Consulting, Inc. (EEC), Mr. Votaw is responsible for coordinating the daily business operations, project management, field surveys, report development, and quality assurance. Some of the primary focus operations of EEC include biological and ecological services including environmental impact assessments, National Environmental Policy Act (NEPA) document preparation, endangered species surveys, biological assessment, fish and wildlife habitat assessments, wetland delineations, Phase I Environmental Assessments, regulatory permitting, compliance, compensatory wetland and waterway mitigation design & development, traffic noise studies and sound barrier design. Mr. Votaw has served as project manager and/or lead scientist on a myriad of diverse projects within the states of Oklahoma, Texas, Arkansas, Kansas, Louisiana, and Missouri.



**Steven R. Votaw**  
**President**

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**Previous Employment:**

***1989 to 1999:***

Senior Project Manager in the Regulatory Branch of the Tulsa District Corps of Engineers. Mr. Votaw's responsibilities included Section 404 of the Clean Water Act permit evaluations, compliance, enforcement and surveillance, mitigation, and delineations. Critical components of his permit evaluation responsibilities included application and assessment of the Section 404(b)(1) guidelines for each Standard Permit issued. Each project required an in depth and attentive Alternatives Analysis in order to determine the least environmentally damaging practicable alternative. Public presentations, meetings, and coordination was an integral part of his duties as well as maintaining near constant coordination and cooperation with State and Federal resource and regulatory agencies.

***1989-1991:***

Park Ranger, Buckhorn Lake, Kentucky with the U.S. Army Corps of Engineers. Primary responsibilities included natural resource management, visitor assistance, patrol, project coordination, assessment management, boundary establishment surveys, timber management point of contact, coal mine liaison, and special projects manager.

***1987 to 1989:***

Fisheries Technician with the Oklahoma Department of Wildlife Conservation. Primary responsibilities included data collection and evaluation, completing standardized fisheries sampling techniques, preparing fisheries management reports for lakes, ponds, and streams. Public coordination and involvement was an integral part of overall position requirements.

**Training and Certifications** (course length 40 hours unless otherwise noted)

USFWS Endangered species survey and consultation methodology workshop (8 hours)

NEPA and the Transportation Decision Process

Environmental Laws and Regulations

Environmental Impact Assessment of Projects

Regulatory I - U.S. Army Corps of Engineers Regulatory Program Introduction Course

Regulatory II - USACE Regulatory Program Secondary Course

Regulatory Program IV - Wetland Delineation

Hydric Soils Determination (Advanced Course)

Conflict Management Skills to Resolve Highway/Wetland Issues

Contract Administration

Leadership Education and Development

Archaeology for Managers

Handling Difficult People (8 hours)

Learning Styles (8 hours)



**Steven R. Votaw**  
**President**

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Traffic Noise Modeling (TNM 1.0)

**Professional Affiliations and Appointments**

Society of Wetland Scientists  
National Regulatory Conference Task Force  
Lead Author & Assessment Team Leader for USACE HGM Lacustrine Fringe National Wetland Guidebook Development  
Review Panel Member for Riparian Area Management Handbook  
Regional Farm Pond Management Coordinator - OK Department Wildlife Conservation  
National and Oklahoma Chapter - American Fisheries Society  
National and Oklahoma Chapter - The Nature Conservancy

**Professional Certification and Nominations**

Wetland Delineation Instructor  
National Regulator of the Year - 1994, 1996  
Southwestern Division Regulator of the Year - 1995, 1997

**Publications**

Votaw, Steven R., "Federal Permits for Wetlands and other Environmental Concerns." *Proceedings of Industrial Minerals Symposium*. Oklahoma Geological Survey, August 1993.

Votaw, Steven R., et. al., "A Regional Guidebook for Application of Hydrogeomorphic Assessments to Lacustrine Fringe Wetlands." 2000.

**Scientific Reports**

Numerous Wetland Delineation, Threatened & Endangered Species, Wildlife Habitat Management Reports of Survey and Plans. 1999 to present.  
Designed and developed multiple wetland and waterway compensatory mitigation plans using creation, restoration, enhancement, & preservation.  
Standardized Sampling Procedures Fisheries Management Report for Chelsea City Lake. OK Dept. of Wildlife Cons. 1989.  
Standardized Sampling Procedures Fisheries Management Report for Bixhoma Lake. OK Dept. of Wildlife Cons. 1989.  
Upland Bird Management Plan for the Diamond Bar D Ranch. 1996.  
Fish and Wildlife Management Plan for the Rock Creek Ranch. 1996.  
Wildlife Management Plan for the West Ranch. 1995.  
Wildlife Management Plan for the Sitterly Ranch. 1993.





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**Principal Investigator and Primary Author**

The proposed project would involve development of multiple features within the requested 139-acre lease expansion area adjacent to their existing lease area on Lake Texoma. The EA has been prepared in the preferred format for the U.S. Army Corps of Engineers review. The proposed project area is situated on USACE property and includes both terrestrial and aquatic areas on Lake Texoma, near Aylesworth, Marshall County, Oklahoma. Responsible for preparation of environmental assessment and supporting technical reports.

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**7<sup>th</sup> Street Bridge Replacement Project, Excelsior Road to EW 280 Road, Craig County, OK 2017  
Categorical Exclusion**

**Reviewing Agency: Cherokee Nation/Oklahoma Turnpike Authority**

**Principal Investigator and Primary Author**

The Federal Highway Administration Office of Tribal Transportation in cooperation with the Oklahoma Turnpike Authority and the Cherokee Nation proposes the replacement of the 7th Street Bridge that crosses I-44 (Will Rogers Turnpike) in Craig County, Oklahoma. Responsible for categorical exclusion documentation and supporting technical reports.

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**Proposed Delaware Tribe of Indians Casino, Leavenworth, Kansas 2016-2017  
Delaware Tribe of Indians**

**Reviewing Agency: Bureau of Indian Affairs**

**Principal Investigator and Primary Author**

The proposed project was prepared on behalf of the Delaware Tribe of Indians to facilitate the Bureau of Indian Affairs review of potential environmental impact assessment associated with a proposed casino for the Tribe. Once approved, the property will be converted from Fee to Trust status. Responsible for preparation of environmental assessment and supporting technical reports.

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**Chimney Rock Reservoir Improvements Phase 2, Mayes County, OK 2016  
Categorical Exclusion**

**Reviewing Agency: Cherokee Nation/FHWA Central Federal Lands Highway Division**

**Principal Investigator and Primary Author**

The Federal Highway Administration in cooperation with the Cherokee Nation, proposes to reconstruct and improve an approximate 4-mile long section of Chimney Rock Reservoir Road near Salina in Mayes County, OK. The project is funded, in part, by Title 23 funds through the Tribal Transportation Program (TTP). TTP funds are provided to the Cherokee Nation in accordance with the Tribal Transportation Program Agreement between the Cherokee Nation and the United States Department of Transportation. Responsible for categorical exclusion documentation and supporting technical reports.

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**Port of Muskogee Rail Expansion, Muskogee County, OK 2016  
Environmental Assessment**

**Reviewing Agency: Port of Muskogee/U.S. DOT**



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**Principal Investigator and Primary Author**

The purpose of the proposed project is to modernize the existing rail connection to the Port of Muskogee at Milepost 500.02 of the Union Pacific Railroad Company's Cherokee Subdivision No. 2 and to provide additional capacity for manifest and unit train service by extending the Port of Muskogee Railcar Marshaling Yard for review by the U.S. Department of Transportation Federal Railroad Administration. Responsible for preparation of environmental assessment and supporting technical reports.

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**White Oak Road (NS4340) Improvements, Craig County, OK** **2015**  
**Environmental Assessment**  
**Reviewing Agency: Cherokee Nation/ FHWA Central Federal Lands Highway Division**  
**Principal Investigator and Primary Author**

The Federal Highway Administration, in cooperation with the Cherokee Nation, proposed to reconstruct and improve NS 4340 in Craig County, OK. The project is funded, in part, by Title 23 funds through the Tribal Transportation Program (TTP). TTP funds are provided to the Cherokee Nation in accordance with the Tribal Transportation Program Agreement between the Cherokee Nation and the United States Department of Transportation. Responsible for categorical exclusion documentation and supporting technical reports.

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**Cutoff Dredging and Spoil Pond Construction, Johnston's Port 33, Rogers County, OK** **2014**  
**Environmental Assessment**  
**Reviewing Agency: U.S. Army Corps of Engineers**  
**Principal Investigator and Co-Author**

For review and approval by the U.S. Army Corps of Engineers, the purpose of the proposed action was to access areas along the McClellan-Kerr Arkansas River Navigation System for additional barge fleeting space for Johnston's Port 33. Responsible for environmental assessment preparation.

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**North 193<sup>rd</sup> East Avenue Improvements, Rogers County, Oklahoma** **2013**  
**Categorical Exclusion**  
**Reviewing Agency: Oklahoma Department of Transportation**  
**Principal Investigator and Primary Author**

Categorical exclusion prepared for the North 193<sup>rd</sup> East Avenue Improvements. The proposed improvement project is approximately 2.13 miles in length and extends from State Highway 266 (Port Road) north to East 76th Street North. North 193<sup>rd</sup> East Avenue contains two 12-foot wide travel lanes, one in each direction with no shoulders. The purpose and need for this proposed project along this section of North 193<sup>rd</sup> East Avenue is to improve safety to a heavily travelled local roadway through a residential area that has no shoulders. Responsible for categorical exclusion documentation and supporting technical reports.

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**Bauman Abandoned Mine Land Project, Rogers County, OK** **2012**  
**Environmental Assessment**  
**Reviewing Agency: Oklahoma Conservation Commission**

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**Principal Investigator and Primary Author**

This environmental assessment was prepared for the Oklahoma Conservation Commission concerning reclamation of abandoned mine land. The proposed action would consist of filling the water filled pits and drainage ditch with mine spoil from the project area to the original contour and then be re-vegetated to prevent erosion. Responsible for preparation of environmental assessment and supporting technical reports.

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**Northeastern State 166/160 Abandoned Mine Lands Project, Wagoner County, OK                      2011  
Environmental Assessment**

**Reviewing Agency: Oklahoma Conservation Commission**

**Principal Investigator and Primary Author**

This environmental assessment was prepared for the Oklahoma Conservation Commission concerning reclamation of abandoned mine land. The proposed action includes the reclamation of abandoned mine land located to the immediate north of the Northeastern State University and west of the Creek Turnpike in Broken Arrow, Wagoner County, Oklahoma. Responsible for preparation of environmental assessment and supporting technical reports.

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**Proposed Natural Gas Pipeline Project, Marshall and Bryan Counties, OK                      2011  
Environmental Assessment**

**Reviewing Agency: U.S. Army Corps of Engineers**

**Principal Investigator and Co-Author**

An environmental assessment was prepared to identify and address any potential impacts associated with a proposed 2.9-mile 8-inch diameter steel pipeline on United States Army Corps of Engineers controlled land near Lake Texoma in Oklahoma. Responsible for preparation of environmental assessment and supporting technical reports.

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**Pawnee Nation 4<sup>th</sup> Street Improvements, Pawnee, OK                      2010**

**Pawnee Nation, 9<sup>th</sup> Street Improvements, Pawnee, OK                      2010**

**Campus Improvements and Cemetery Improvements                      2010**

**Categorical Exclusions**

**Reviewing Agency: FHWA Central Federal Lands Highway Division**

**Primary Investigator and Author**

The Pawnee Nation, in corporation with the Federal Highway Administration Central Federal Lands Highway Division, proposed to improve 4<sup>th</sup> Street 9<sup>th</sup> Street, in addition to, campus and cemetery roadway improvements. Responsible for categorical exclusion documentation, supporting technical reports and coordination with Central Federal Lands Highway Division.



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**Aylesworth 2D Seismic Survey, Marshall County, OK**  
**Environmental Assessment**  
**Reviewing Agency: U.S. Army Corps of Engineers**  
**Principal Investigator and Primary Author**

**2010**

Chesapeake Energy Corporation proposed to conduct a two dimensional (2D) seismic survey on United States Army Corps of Engineers Land at Lake Texoma in Marshall County, Oklahoma. Five seismic lines and access routes to access these lines on COE property were assessed.

Additional NEPA document preparation includes:

- Osage Nation Fee to Trust Application EA to BIA, Bartlesville, OK
- Osage Nation Fee to Trust Application EA to BIA, Pawhuska, OK
- Delaware Tribe Fee to Trust Application EA to BIA, Leavenworth, KS
- Kialagee Tribal Town Fee to Trust Application EA to BIA, Broken Arrow, OK
- Port of Muskogee Rail Spur Project, EA in Muskogee, OK
- Chimney Rock Road Improvement Project CE, Mayes County, OK
- White Oak Road Improvement Project CE, Craig County, OK
- U.S. Highway 60 Improvement Project, Bartlesville, OK, to Vinita, OK
- U.S. 75 Improvement Project, Weleetka, OK, to North Canadian River Bridge
- S.H. 10 Improvement Project, Miami, OK
- 86<sup>th</sup> Street North Improvement Project, Owasso, OK
- Covell Road and MacArthur Blvd Improvements, Oklahoma City, OK
- Mustang Road Widening, City of Yukon, OK
- Southeast 15<sup>th</sup> St. Improvements, Midwest City, OK
- South Western Avenue Improvements, Cleveland County
- I-235/Harrison Avenue Interchange Improvements, Oklahoma City
- 193<sup>rd</sup> East Avenue Improvements, Rogers County, OK
- 4<sup>th</sup> Street Improvements, Pawnee County, OK
- 9<sup>th</sup> Street Improvements, Pawnee County, OK
- Pawnee Nation Campus Improvements, Pawnee County, OK
- Bridge 72 Over Wickcliffe Creek Replacement, Mayes County, OK
- NS 4340 Road Improvements, Craig County, OK
- Aylesworth 2D Seismic Survey, Marshall County, OK
- Baumann Abandoned Mine Lands Project, Rogers County, OK
- Boomerang #1H Well Site, Grayson County, TX
- Brianna #1-3 Well Site, Caddo County, OK
- Hoodoo #14 and #17 Well Site, Osage County, OK
- North Kaw Lake 8-1 Well Site, Kay County, OK
- Maxim 34-1 and USA 4-1 Well Site, Osage County, OK
- Northeastern State 166/160, Broken Arrow, Wagoner County, OK
- Jetta J&M 1H and Cannon 1H Pipeline Connections, Grayson County, TX
- Natural Gas Pipeline Project, Marshall and Bryan Counties, TX



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- Southland 1H Well, Grayson County, TX
  - Clinton 4-3H Well Site, Washita County, OK

### **Phase 1 Environmental Assessments**

Coordinated and/or prepared multiple site assessments on over 1,000 acres of property in Oklahoma, Kansas, and Arkansas.

### **Traffic Noise Assessments**

Prepared or coordinated assessments for projects throughout Oklahoma. Responsibilities included obtaining ambient noise readings, creation of noise models and report preparation. Noise models were prepared and approved for the following projects:

- Eastern Oklahoma County Turnpike Interchange at I-40, OK, 17 miles
- John Kilpatrick Turnpike and Interstate 40 Interchange Improvements, OK
- U.S. 69 Interchange Construction at Kinkead Road, McAlester, OK, 1 mile
- N. Western Avenue Widening, Oklahoma County, OK, 1.4 miles
- West 81<sup>st</sup> Street South Improvements, Creek County, OK 1.25 miles
- U.S. 270 over Caston Creek, Leflore County, OK 1 mile.
- S.H. 10 Improvement Project, Miami, OK, 4 miles
- 86<sup>th</sup> Street North Improvement Project, Owasso, OK, 4 miles
- Covell Road and MacArthur Blvd Improvements, Oklahoma City, OK, 1 mile
- Mustang Road Widening, City of Yukon, OK, 1 mile
- Southeast 15<sup>th</sup> St. Improvements, Midwest City, OK, 1.25 miles
- South Western Avenue Improvements, Cleveland County, 3 miles
- I-235/Harrison Avenue Interchange Improvements, Oklahoma City
- 193<sup>rd</sup> East Avenue Improvements, Rogers County, OK, 1.2 miles.
- NW 10th Street, Oklahoma City, OK
- North Western Avenue, Oklahoma County, OK
- 96th Street and 129th East Avenue, Owasso, OK
- West 81st Street, Sapulpa, OK
- State Highway 51 Improvement Project, Wagner to Tahlequah, OK,
- Gilcrease Northwest Expressway Extension Project, Tulsa, Osage County, 4.5 miles.
- 86th Street North Improvement Project, Owasso, Tulsa County, 4 miles.
- State Highway 10 Improvement Project, Miami, Ottawa County, 4 miles.
- U.S. Highway 70 Bridge Viaduct Project, Durant, Bryan County, 1 mile.
- NW 150th Street Improvements, Oklahoma County, 1 mile.
- I-40 Improvement Project, 1-240 to Choctaw Road, Oklahoma County, 2 miles.
- South Western Avenue, SW 134th to SW 179th Street, Cleveland County, 3 miles.



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**Wetland Mitigation/Reforestation Plans**

- 10.5-acre wetland and waterway mitigation design plan, Coweta, OK
- 10 acre wetland, waterway, & pond mitigation design plan, Owasso, OK
- 5.5 acre wetland mitigation area, Durant, OK
- 12 & 5 acre wetland mitigation area plans, Broken Arrow, OK
- 5 acre wetland mitigation area plan, Muskogee, OK
- 25 acre bottomland hardwood wetland, Verdigris, OK
- 18-acre wetland mitigation plan. Tulsa County, OK.
- 10-acre wetland mitigation plan. Cleveland County, OK.
- 3-acre bottomland hardwood reforestation plan. McClain County, OK.
- Wetland Mitigation Bank in Oklahoma (80 acres). Tulsa County, OK.
- 5-acre wetland & waterway compensatory mitigation plan using 3 wetland areas and a 1,500 linear foot creek channel, Broken Arrow, OK.
- Designed, developed, and provided construction oversight of a 2 acre wetland and a 1,900 linear foot creek channel mitigation project, Washington County, OK.
- Developed a conceptual wetland mitigation plan for a 200+acre turnpike extension project in southeastern OK.
- Developed and designed a wetland and waterway mitigation plan for a school sports facility expansion project, Owasso, OK.
- Developed a 2-acre wetland mitigation plan for a golf course expansion project.
- Development of a mitigation area modification plan to address a creek channel relocation project.
- Developed EPA and USACE enforcement related mitigation plans to restore and return affected waters of the United States to former condition, function, and capacity.

**Wetland and Waterway Delineation Studies**

- Comprehensive Wetland delineations conducted on approximately 80 acres of previously disturbed lands involving over 100 trackhoe trenches and 150 sample sites.
- 156-acre commercial/residential development, Coweta, OK
- Wetland delineations on a 1,000-acre industrial park and Report of Survey for submittal to the Corps of Engineers. The largest wetland impact and mitigation project in the Tulsa District.
- Wetland Delineations and Section 404 Permit Acquisition for a proposed Limestone Quarry and Industrial Park Development on 46<sup>th</sup> Street North (Port Road) in Rogers County, OK. The project also required the development of a 200-acre wetland mitigation design plan to offset a proposed 90-acre impact project. The Mitigation Area is located in the southwest corner of 46<sup>th</sup> Street North and 193<sup>rd</sup> East Avenue near the Port of Catoosa entrance.
- Wetland delineations, Section 404 of the Clean Water Act permit acquisition and developments of a compensatory mitigation plan for the proposed O'Brien Park Improvement Project at 66<sup>th</sup> Street North and Lewis Avenue, Tulsa County, Oklahoma.
- Wetland Delineation and GPS Survey for a 165-acre power generation plant development, Warner, OK.
- Multiple residential development projects in Oklahoma City, Norman, Tulsa, and Broken Arrow, OK, ranging in size from 10 to 300 acres.



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- River floodplain commercial development project, Norman, OK on 275 acres.
  - Hospital construction project, Owasso, OK. – 320 acres.
  - Public school development project, Owasso, OK – 20 acres.
  - 86<sup>th</sup> and 96<sup>th</sup> Street Widening Projects, Owasso, OK – 1 mile sections each.
  - State Highway 10 Wetland Finding, Miami, OK – 6.5 miles.
  - U.S. Highway 70 Wetland Finding, Durant, OK – 2.5 miles.
  - Gilcrease Expressway Construction Project, Tulsa, OK – 8 miles.
  - Multiple road/bridge/highway improvement projects across the State of OK for ODOT.
  - Municipal Airport Runway Extension Projects in Bartlesville, OK & Rogers, AR.
  - EPA enforcement case in disturbed wetlands on 800-acre parcel of land in Tyler, TX.
  - Multiple utility line alignments for Florida Power & Light, Forney, TX.
  - 10-mile transmission line in Okmulgee County, OK.
  - 11-mile highway project in McAlester, OK.
  - 13-acre commercial development project, Tulsa, OK.
  - Wetland & Waterway Surveys for the U.S. Highway 60 Improvement Project between Bartlesville and Pawhuska, Oklahoma.
  - Wetland and Waterway delineations for the 47-mile Muskogee Turnpike extension, Southeast Oklahoma.
  - Delineated wetlands along a 36.6-mile gas pipeline corridor and prepared the Report of Survey for submission to FERC.

### **Section 404 Permits**

- Facilitated hundreds of 404 permit acquisitions in Ft. Worth, Little Rock, Kansas City, and Tulsa Districts – acting as the agent for the project proponents.
- Coweta Crossing Commercial Development, Coweta, OK
- Owasso Sports Park Detention, Owasso, OK
- North Tulsa Sports Complex in Tulsa County, OK. The proposed project consisted of 26 soccer fields and associated parking areas.
- Wal-Mart Mechanical Distribution Center in Ochelata, OK. Permitting required the design of a 1-acre wetland & 2,000 linear-foot reestablished creek channel mitigation plan,
- Agent responsible for acquiring all 404 permits regarding the Creek East Turnpike Extension Project for the Oklahoma Transportation Authority.
- Facilitated the Section 404 permit acquisition for the East Extension of the Creek Turnpike in Broken Arrow and Catoosa, OK.
- Agent responsible to the City of Bixby for preparing a joint 404 permit application for the Haikey Creek Local Flood Protection and Haikey Creek Diversion Channel Improvement Projects.

### **Threatened and Endangered Species Assessments**

- Performed hundreds of biological assessments, Determinations of Effect, and Consultation with the USFWS including:
  - Multiple residential development projects
  - Multiple commercial developments



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- Rock quarries
- 11 mile transmission line, Taney County, MO
- 9 mile transmission line, Cherokee County, OK
- 15 mile transmission line, Pawnee & Lincoln Counties, OK
- 5 mile transmission line, Payne County, OK
- 4 mile transmission line, Payne County, OK
- 6 mile transmission line, Payne County, OK
- 8 mile transmission line, Osage County, OK
- 12 mile transmission line, Dallas & Webster County, MO
- 16 mile transmission line, Benton County, MO
- 2 mile transmission line, Barry County, MO
- Chimney Rock Road Improvement Project, Mayes County, OK
- White Oak Road Project, Craig County, OK
- CR 4410 Improvement Project, Craig County, OK
- 6 Gaming Facility Projects in Osage County, OK
- Hundreds of Oil and Gas Development Projects, OK & TX
  
- Acoustic Bat Surveys:
  - 11-mile Transmission Line, Taney Co., MO
  - Utility Line Installation Project, Broken Arrow, OK
  - Residential Development Project, Broken Arrow, OK
  - County Rd NS 4410 Improvement Project, Craig County, OK
  - Communication Tower, Carroll Co., AR
  - 5-mile Transmission Line, Cherokee Co., OK
  - Rail Spur & Siding Expansion, Muskogee, OK
  - Stevedoring Slip Development, Wagoner County, OK
  - 9-mile Transmission Line, Cherokee County, OK
  - Transmission Line, Pittsburg County, OK
  
- Performed hundreds of ABB surveys in OK, TX, KS, AR including:
  - Ft. Smith Airport
  - Hartford Mine Project
  - City of Owasso Garnett Road
  - Sports Park Detention Facility, Owasso, OK
  - Multiple Communication Towers in OK
  - Multiple Roadway projects, OK
  - Multiple Transportation Corridors, OK
  - Transmission line corridors, OK
  - Numerous Oil and Gas Development Projects, OK, AR, KS, TX
  - Multiple Tribal Development Projects, OK
  
- ABB presence/absence survey and bait away effort for an 11 mile pipeline replacement project through Logan and Franklin Counties, AR.
- State Highway 10 Improvement Project, Miami, OK (6 mile section)
- U.S. Highway 60 Improvement Project, Pawhuska to Vinita, OK – 60+ miles



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- Arkansas River Corridor Study Flora and Fauna Inventory, Tulsa Co., OK – 42 miles
  - Performed American Burying Beetle Presence/Absence surveys in Southeastern OK and Northern TX associated with a 150-mile long natural gas pipeline.
  - Provided endangered species surveys for an 8-mile water and transmission line corridor, Forney, TX.
  - American Burying Beetle Surveys associated with proposed utility projects for the Cities of Bartlesville, Boswell, Calera, Claremore, Durant, Sand Springs, and Tulsa.
  - Interior Least Tern Presence surveys, Canadian River, Haskell Co., OK.
  - Habitat Identification Surveys for the Interior Least Tern, Bald Eagle, and American Burying Beetle in 3 counties in Southeastern OK.
  - American Burying Beetle Presence/Absence surveys, Keystone Lake, Grand Lake, Eufaula Lake, and Hugo Lake.
    - Endangered Species Surveys for the 47-mile Muskogee Turnpike Extension Project, Southeast Oklahoma.
    - ABB Surveys for multiple highway and county roadway/bridge improvement projects in Oklahoma.

**GPS/GIS Mapping**

- EEC utilizes GPS information and GIS to develop, prepare and display all types of mapping, resource, and asset location information.
- EEC has prepared thousands of maps and exhibits for project related information and resource display and presentation purposes.
- GPS and GIS data acquisition and presentation is utilized for every EEC project.
- Performed GPS trail positioning and location effort along with GIS presentation of a 9.1-mile primitive trail development along the Arkansas and Grand Rivers in Northeastern Oklahoma.
- Provided GIS information graphical synthesis for the Three Forks Inland Harbor project adjacent to the Arkansas River, Muskogee, OK.
- T&E Habitat Assessments and Sensitive Habitat Area delineations and mapping.
- Arkansas River Corridor Study Baseline Inventory Project sample site locations



## Sean T. Votaw

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### Experience

#### **FIELD BIOLOGIST EAGLE ENVIRONMENTAL CONSULTING VINITA, OKLAHOMA - 2010- PRESENT**

- Performed endangered species surveys, habitat evaluations, and biological assessments
- Performed waters of the US field surveys and wetland delineations
- Conducted Phase I Environmental Site Assessments
- Conducted Wetland mitigation area monitoring
- Conducted Reforestation area monitoring surveys
- Performed Bat surveys (acoustic and mist netting)
- Soil surveys
- Plant identification
- Landscaping/ tree removal
- Operation and maintenance of equipment, vehicles, and heavy machinery
- Wildlife habitat inventory and assessment
- Operated GPS data collection technology for multiple survey types
- Data analysis using for spreadsheet data and mapping information

- Orienteering by map and GPS equipment to navigate, find, and conduct surveys in remote areas

#### **RANCH MANAGEMENT PHEASANT HILL RANCH; 2008-PRESENT**

- Conducted land and resource management
- Operation of Farm equipment and machinery
- Performed fence building/repair
- Performed livestock operations & herd management
- Assisted with hay production/harvest
- Pecan harvesting operations
- Performed equipment maintenance
- Conducted landscaping activities

### Education

- Northeastern State University; Biology (fish & wildlife management) 2016- 2019
- Arkansas Baptist College; Associate of Arts Degree - 2015-2016
- University of Arkansas at Little Rock; Undergraduate - 2014-2015



Sean T. Votaw

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*Awards, Selections, Certificates:*

ASTM 1527-13 Phase I Environmental Site  
Assessment Training

Scholarship – Oklahoma Chapter of the Wildlife  
Society

Chancellor's Scholarship Program  
University of Arkansas Little Rock

Division I NCAA Baseball  
U. Arkansas Little Rock and Pine Bluff

Arkansas Baptist College  
Baseball Scholarship